

# TOTAL AMIGA

Issue 10, Spring 2002

£3.50

Descent:  
FREESPACE

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WoASE Show Report  
AmigaOS 4 Update

### Features:

AmiMPC

### Reviews:

Mediator 4000  
EZKey XS and  
Multimedia Keyboard

### Support:

B2B: Mode Promotion  
Directory Opus Tutorial

For Amigans, By Amigans, On Amigas!



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## Editorial

Welcome to the first issue of Total Amiga! If you're an existing Clubbed subscriber you may just not have heard that Total Amiga is the new name for the magazine. We think it better reflects the range of Amiga subjects we cover and at least now you have a chance of guessing what the magazine's about from the title! For new readers the fact that Total Amiga the new name for an existing magazine explains why this is issue 10, we had 9 previous issues of Clubbed and wanted to make it clear that we have a track record and are committed to publishing the magazine.

Regular readers will notice that along with the new name and logo we've completely redesigned the magazine. There's a new four column layout which gives us much more flexibility in how we organise pages and a new font used for headings. This change is far from skin deep, as we've tried to incorporate more information into the new layout. The biggest change are the new "Info" boxes which go with each review and give you much more information on the reviewed product including its system requirements and the Amiga(s) we used to test it. I hope you like the new look but

as with the old one I expect it will be refined over time, please let us know if you have any comments or suggestions.

If you've read our announcements about Total Amiga you will know that we are aiming to move from quarterly to bi-monthly publication soon, to do this we need to find more contributors to spread the work of writing the magazine. Anyone can write for the magazine and we are interested in any article which involves the Amiga, it could be a tutorial, review, opinion or even just a letter. If you'd like to try your hand please contact me at one of the addresses below or visit the contribution section of our website.

Speaking of the website we have completely redesigned it for Total Amiga and added lot's more information. You can quickly find out what the current issue is, which back issues we have available and how to order single issues and subscriptions. You can't yet download download back issues in PDF format as I mentioned in the last issue, this is due to an incompatibility between Ghostscript and APDF, but we hope to make this option available soon. A new feature of the site is the



behind the scenes section, here you can read about how the magazine is made and we will post sneak previews of future issues.

There are lots of exciting things going on in the Amiga world at the moment, the news on the OS 4 front is looking sounding good now Hyperion have taken the helm and it sounds like we could have something concrete to report in the next issue. Prototypes of both the bplan Pegasos motherboard and the Elbox Shark PPC accelerator were shown at the Koln show last November (although only the Pegasos was actually running) so along with the AmigaOne it looks like we'll also have a choice of hardware when OS4 arrives. You can find more detail on OS 4 in out update on page 10. We're also lucky enough to have a column from Amiga's own Fleecy Moss in this issue so you can get the news straight from the horse's mouth (so to say), don't miss that on page 11.

Robert Williams

## The Chairman Speaks

In these frugal times it is difficult to gauge just how many active Amiga users there are, while on a daily basis I view on Amibench whole systems being sold complete with high quality original software. That of course means they are leaving the Amiga for good, not keeping their software means they don't even intend to use a PC running Amiga OS XL or Amithlon which saddens me. Based on these indications it made the decision even more difficult as to whether or not to put on a show in 2001.

After the fairly successful SEAL-O-RAMA in 2000, it was hard to know how to approach putting on a show for 2001 (way back in April when I started to consider it). There seemed to be less active Amigans about and little prospect of being able to have two shows in the South East (Kickstart and SEAL-O-RAMA). A few weeks later I was approached by a good friend of mine Mike Carrillo who founded and helps run ANT (Amiga North Thames) about the prospect of joining forces to put on a show in the South East of England. It was intended to be a marginally larger show than SEAL-O-RAMA and therefore attract a larger audience. We thought it would be a good idea to hold

the show in November, to hopefully coincide with the estimated release of OS4 and AmigaOne (about October).

The more we thought about putting on a show the more enthusiasm we built up, and after a meeting between the two user groups it was decided we were going to put on a show. As we intended to put a show on in the South East of England it would be best if all the active user groups in the South East were involved. So Kickstart and ASA were invited to join forces but as Kickstart's K4 was imminent, we were not too sure if they would be interested (but I was sure I would be able to twist their arm).

SEAL attended K4 show in May helping out in the games arena (we ran the Shogo tournament), and had a user group table where we sold subscriptions to this very magazine (at the time called "Clubbed") and enjoyed chatting to the community. There was one concept of the show that shocked us, this was the poor attendance after three shows that had been packed to the rafters, but we put this down to the fact that it was a very hot sunny bank holiday, and thought that many people had probably headed to the beaches for sun, sea and sex (well sun and sea for sure)! I must say that when we finally

announced we intended to put on an Amiga show I was quietly concerned after witnessing the Kickstart K4 show. But we (SEAL, ANT, Kickstart and ASA) decided to go ahead with it and hope for the best.

The main issue was to put on a show that was commercially attractive to the dealers, interesting (new products maybe) and affordable to the community and had a large user group influence. Well the last bit was easy enough as there were four user groups organising and managing it, to make it commercially attractive to the dealers all we had to do was get large numbers to attend (gulp!) and make the tables affordable, and last but not least for the community, the show had to be well priced (less than the cost of a packet of fags) and something new (OS 4 and AmigaOne) to drool over and purchase.

Just before the show it was announced that OS 4 and the AmigaOne wouldn't be released until early next year (2002), just our luck I thought, but it was too late to cancel or re-schedule the show for another date as the venue had been paid for now and it wasn't cheap (try finding a venue with excellent rail links to London, close to the M25, with a bar and capable of holding 400 people to see what it costs)!



Oh well once again lets make the best of it was our attitude and I must say that I'm glad we did. Although the AmigaOne and OS 4 wasn't available to either see running or purchase there was plenty to see such as the excellent Mediator team showing various hardware configurations, the demonstration of Amiga OS XL/Amithlon and Cloanto's Amiga forever 5.

I will not go into lots of detail about the show as that is covered in our show report, but I think that the vast majority who attended the show were happy, there was a great atmosphere about the place and I can tell you it was busy, so busy that myself and a few others running the show didn't get to look round! I will make sure I have a good nose around at Alt WoA 2002 that's for sure! Will there be a World of Amiga South East 2002, answers on a postcard to Total Amiga!

Mick Sutton

## Write On!

We'd like to make Total Amiga more "interactive" so we need your input!

**Got a question** you'd like answered or an opinion you'd like to share? Write to us and we'll include it in a letters page.

**Got a tip** for other readers or even an article up your sleeve? Send it in and you could very well see your name in print.

**Got a suggestion** or comment on the magazine? Let us know and we'll try and make Clubbed better for you.

## About Total Amiga

Total Amiga is published quarterly by South Essex Amiga Link. For subscription details please contact us at the address below or visit our website.

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## Only Amiga Made it Possible

Total Amiga is designed and laid out using:

**Hardware:**  
 Amiga 3000  
 CyberStorm PPC/060  
 CyberVision PPC  
 128Mb RAM, about 13Gb HDD space.

**Software:**  
 Amiga OS 3.9 by Amiga  
 PageStream 4 by Softlogik  
 ImageFX 4 by Nova Design  
 Photogenics 5 by Paul Nolan  
 Final Writer 5 by Softwood

Ghostscript 6.50 from Aladdin Enterprises

There are also some essential utilities we couldn't live without: Directory Opus 5, SGrab, MCP, Turbo Print 7, MakeCD.

Our thanks to the creators of this and all the other great Amiga software out there.

Total Amiga is entirely created on the Amiga, no other machines are used at any stage of the design or layout process.

## Legalese

The views expressed in this magazine are those of the author of each piece, they do not necessarily reflect the views of the editor, other contributors or SEAL. Please Note: Total Amiga is produced by SEAL members in their spare time, while we will always strive to produce the magazine on time and include all the advertised contents this is not always possible due to other commitments. The price you pay for Clubbed covers our costs and nothing more, we don't make a profit from it.

If you wish to contact a contributor please send your message to one of the addresses above and we will pass it on.

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# Show Report: World of Amiga South East

**S**EAL members arrived just before nine in the morning to start preparing for the show (which opened at twelve). Soon after some of the ANT guys arrived and we started with the first job, getting out all the (incredibly heavy) tables and setting them out in the hall, this went smoothly because we had done a dry run a few weeks before. Mick Sutton (who is a power engineer in "real life") then laid out the power cables (assisted by Sam Byford) from the sockets at the side of the hall to the central corals and protected them with safety strip. Robert Williams put up the various posters he had prepared around the venue. During the time before the show the other user groups (coming from further afield) and vendors started to arrive. Nick Darley-Jones of GAG (Glos Amiga Group) deserves a special mention as he arrived very early with his young family in tow and worked hard through out the show as well as putting on an excellent show on the Mediator support stand.

Mike Woods of ANT organised the PA system in the presentation hall and the ASA guys got the Sensible soccer tournament ready. Michael Carrillo (Mikey C) brought along a laptop and printer and was hard at work producing badges for the exhibitors and a few last minute signs. Last but not least the hard working Lesley was busy in the kitchen making sandwiches to feed the crowds.

As the doors opened we were still making the final preparations, with Alf Whitfield and Robert Williams still putting skirting (which had only been found at the last minute) around the dealer's tables. Then the crowds arrived and suddenly the hall was too packed to do anything more! Throughout the day (as you can see in some of the photos) there was very little room to move, which gave the show a great atmosphere.

Working our way around the hall from left to right we come to the KickSoft stand where Ray McCarthy was in his element demonstrating his range of software to anyone

who showed a glimmer of interest, and in most cases he got a sale! KickSoft sell a wide and growing range of applications and utilities, at the show he was heavily promoting Pagestream 4, a recent addition to his range.

On the next stand we had Pagan Games who demonstrated the excellent Earth 2140 for the classic Amiga and Blobula for Amiga DE. They were also promoting Quingle a new DE game.

The Huddersfield and Blackpool user groups shared the next stand and were busy promoting HAUG's forthcoming Alt.WoA 2002 show which is it be held on XXFebruary.

Fleecy Moss could often be found on the Amiga stand talking to exhibitors and punters alike about Amiga OS4 and Amiga DE. With Amiga were ZeoNeo demonstrating Planet Zed their Xenon inspired shoot em up for the DE.

Michael Battallina of Cloanto had flown in all the way from Florence with a laptop and a

box of Amiga Forever CD's which he sold for a knock down price (£14). Later in the day he gave a presentation of the new version 5 that was released shortly after the show.

Stellar Dreams had a wide range of older games and even some A500's to play them on! A CD32 on their stand was showing Star Trek video CD's via the FMV cartridge.

Weird Science had their usual huge collection of CD's and other software at special show prices.

The biggest stand, in the centre of the hall was Eyeteck who were showing AmigaXL (which runs on QNX) on a very neat PC system in a tiny case. Two AmigaOne mother boards were on display, one fully populated and the other mounted in an EZ tower Z4 showing how it connects to an A1200. Eyeteck also had a range of their Amiga products and did a roaring trade throughout the show.

Forematt Home Computing were showing the latest issue of their interactive CD based magazine, 100% Amiga and

had special offers on subscriptions. They were also demonstrating the recently released Myst style game Aqua.

The Virtual Programming stand attracted a great deal of attention because they had both Bill Hoggett demonstrating the new Amithlon emulator and James Daniels of Apex Designs with the fantastic Payback PPC/Warp3D (once he had rushed home to get the CDs!). Also on the VP stand was Mark Hinton of Amiga Active selling their back issues and explaining the change to "digital".

Behind Virtual Programming the Mediator Support Team put on an excellent demonstration despite the fact that Elbox pulled out at the last minute (coitus interruptus). Three machines were on show,

owned by Nick Darley-Jones of GAG, Sam Thomas of [www.amiga-mediator.co.uk](http://www.amiga-mediator.co.uk) and Sam Byford (who didn't receive his logic board in time for his mediator A4000 to be active), graphics cards, soundcards, TV cards and Ethernet were all demonstrated. A DVD player displaying through the TV card into a window on Workbench really wowed the crowds!

On the SEAL front sales of Clubbed went exceptionally well with loads of new subscribers and it was great to meet many readers in person (however briefly). We had a variety of hardware and software to sell for club funds including a rare A3000T which was snapped up.

ANT had a very nice SCALA presentation advertising their group running on an even nicer flat screen LCD monitor, they also had some second hand

goodies for sale.

The Kickstart table was very quiet which was very unusual as it has always been packed at previous shows.

ASA who organised the games areas at the show had yet more on their own table in the form of a Dynamite tournament. Like ANT and SEAL, ASA members took the opportunity to sell previously abused gear :)

During the show you could take part in the ever popular Sensible Soccer tournament which took place in the presentation hall on the big screen (thanks to HAUG for the loan of the projector). In the main hall punters could try their hand at Hyperion's excellent Shogo on Mick and Robert's PPC machines.

In the centre of the venue was a licenced bar which (surprise,

surprise) did a roaring trade serving the thirsty Amigans. There was also a cafe area with a range of hot and cold food and drinks being served throughout the show, this was also a place where visitors could collapse and look at their purchases.

During the show Robert Williams and Mick Sutton had a meeting with Alan Redhouse (Eyeteck) and Fleecy Moss (Amiga) where they agreed to endorse Total Amiga magazine. At the end of the show Robert made the official announcement of the new name for Clubbed and also said that SEAL will aim to produce the magazine bi-monthly in the near future. Fleecy and Alan then spoke about the Amiga One and signed an agreement for the future development of AmigaOS 4 and beyond.



Sam Thomas giving one of the many popular demonstrations on the Mediator stand.



Everyone was eager to hear the announcements made at the end of the show.



Virtual Programming drew the crowds with Amithlon and Payback. Fleecy (Dennis the Menace) shows Andrew Korn (Tintin) AmigaDE.



Eyeteck were busy all day.



ANT



Kicksoft persuasion tactics.



Fore-Matt.



# Alt.WoA 2!

Huddersfield Amiga User Group are holding their second Alt.WoA show on Saturday the 23rd of February from 11:30 'till 5:30. The venue is the same as last year, The Old Cornmill, Clifton, Brighouse, Huddersfield but this time the show will be filling all three floors of the venue. Everyone had a great time at last years show but this year promises to be even better with more exhibitors and attractions including:

- The Amiga Arena where Amiga Inc. and their partners will be demonstrating the latest hardware and software.
- A dedicated games area with the classic Sensible Soccer competition and the latest titles for you to try.
- Presentations from Fleecy Moss of Amiga and Alan Redhouse of Eyetech on the latest developments followed by questions and answers.
- Access to the Internet from a



CyberCafe run by Wirenet, for those who can't make the show there will be live IRC sessions throughout the day.

As usual SEAL will be at the show with Total Amiga, we are having two tables this year and plan to have two Amigas running one to demonstrate how we produce the magazine

and the other with Descent:Freespace and other cool software.

Last year's show had a great atmosphere as well as interesting exhibitors and content and this one promises even more of the same, don't miss it!

<http://www.alt-woa.org>

# PageStream 4.1

After several minor upgrades a new version of the Amiga's premier desktop publishing program has been announced. Grasshopper have rolled the planned table editor add-on up with a selection of other new features to make PageStream 4.1. Tables are placed as an object on the page, then you can add and delete rows or columns and join cells together to form a complex tables. Cell borders and fills can be customised including all the usual PageStream fill options like gradients and patterns.

A new feature that will be a great boon for us here at Total Amiga and anyone who does mass mailings is the built-in mail merge facility this allows you to print personalised letters and envelopes based on a database of information and,

importantly for us, lets you print sheets of mailing labels. Plus there are these other new features:

- Apply text attributes using the object or reshape tool .
- Improved PDF export with control over compression and encoding.
- Custom column and gutter widths inside text frames.
- Text inset from column edges.
- Improved duplicate and transform.

- Speed improvements.

As I write the Amiga upgrade has just been released and buyers can download it from: <http://www.grasshopperllc.com/>

You can order PageStream from Kicksoft in the UK, the full version costs £199 an upgrade is £39 from version 4 or £79 from version 3.x. To order on-line visit: <http://www.kicksoft.co.uk/>

	October	November	December	
Net Sales	180,000	175,000	142,000	
<b>Operating Expenses</b>				
Selling Expenses	35,000	20%	22,000	16%
Operating Expenses	15,000	8%	10,000	7%
Freight	5,000	3%	4,500	3%
Other	1,500	1%	1,000	1%
Total Operating Expenses	56,500	32%	37,500	27%
<b>General Administrative</b>				
Wages	50,000	28%	50,000	36%
Employer Taxes	24,000	14%	24,000	17%
Equipment	10,000	6%	2,000	1%
Repair/Maintenance	1,500	1%	500	0%
Dues/Subscriptions	900	1%	650	1%

## Grab TV!



Elbox have released drivers that allow owners of their Mediator PCI busboard, Multimedia CD and a compatible TV card to grab images and animation sequences from live TV and video signals. The drivers work with Innovative's VHI Studio program which already supports grabbing images from a range of video digitisers and digital cameras. VHI Studio includes a live preview mode so you can decide which images to grab then it can grab a single frame or a sequence which can be saved in a variety of formats. Automatic MPEG encoding is supported so you can save movie clips and view them later.

For more details on VHI Studio visit: <http://www.vhstudio.com/>

For Mediator information see <http://www.elbox.com> and take a look at Sam Byford's Mediator 4000 review on page 16.

## Updated TurboPrint

It's great to see that Isreesoft are continuing with the development of TurboPrint and trying to keep up with the avalanche of new printers that keep being released! Version 7.21 beta has been released for users of 7.20, this includes drivers for:

- Canon S500/630/6300
  - Epson Stylus C60,C70,C80, Photo 810
  - HP DeskJet 92x, 94x, 96x
- Download it from: <http://www.irseesoft.de/>

## AmigaOS Gets The Euro

The OS3.9 team have released an update to the OS which allows Amiga users to more easily use the Euro symbol, particularly important for those living in the Euro zone. The update consists of new system fonts which contain the Euro symbol, updated keymaps which map the symbol to Alt-E for easy access and updated locale files changing the currency symbol for the affected countries. The copyright symbol that used to be mapped to Alt-E has been moved to Alt-Y.

Download the update from: <http://www.haage-partner.com>

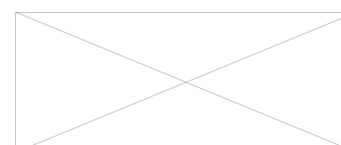


## PhotoFolio

Steeple Software have released an update to their commercial picture cataloguing utility PhotoFolio. Version 2.2 features a handy recent projects list for quicker loading, an abort button during directory scanning and many user interface improvements. The program now supports the PPM file format and support for CMYK JPEG files has been improved. They have also squashed a number of bugs.

PhotoFolio is available distributed by Schatztruhe and costs 34.95Euro (about £22), for more details and to download a demo version visit:

<http://www.scouts.org.au/steeplesoftware/en/index.html>



## MediaPoint Goes RTG

Computer City, a Netherlands based Amiga dealer and developer have re-released the multimedia authoring package MediaPoint and have announced that they intend to resume development. Using Mediapoint you can create presentations and interactive multimedia displays some of its key features are:

- Over 150 smooth transitions.
- Spools audio and animations from hard disk.
- Interactive scripts controlled by mouse, keyboard and touch screen.
- Scripttalk language to control complex displays with variables, conditional jumps.
- AREXX support.
- Antialiasing.
- Free runtime player.

The most exciting part of this announcement is that

Computer City intend to enhance MediaPoint to work on graphics card and sound cards via AHI, in my opinion this would fill a gaping hole in the Amiga market because stalwarts like SCALA are not compatible with modern hardware.

The current version of Media Point is available from Schatztruhe/GTI at 34.95Euro (about £22), for more details visit: [www.compcity.nl/mediapoint](http://www.compcity.nl/mediapoint)



## Play SCUMM!

In days of Yore many of us loved the fantastic graphic adventure games made by Lucas Arts, including the famous Monkey Island series. These games used an engine known as SCUMM (Script Compiler Utility for Manic Mansion) after the first game it was written for. Recently an open source project has been working on a portable engine that will run games using this engine, this is called the SCUMM virtual machine or SCUMMVM. While it is still in an alpha state SCUMMVM already runs several of the Lucas Arts games including some that never made it to the Amiga such as Day of the Tentacle, it also supports the 256 colour VGA style games that were degraded to run on OCS and ECS Amigas. Two Amiga ports of SCUMM have been made one by "nogfx" which works on AGA and graphics cards and another by Rudiger Hanke which is for MorphOS.

- The games currently supported by SCUMM to some degree are:
- Monkey Island 2
- Indiana Jones and the Fate of Atlantis
- Day of the Tentacle
- Monkey Island ( CD version )
- Sam&Max ( Floppy version )
- Full Throttle ( very buggy )

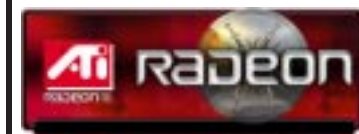
Rather like Quake 2 you will need a copy of the original game as SCUMMVM only provides the engine, not the game data files.

Sebastian Beloch has set up an excellent website which aims to support all the ports of SCUMMVM for the Amiga and also has demo version of some of the games for download so you can give it a try even if you don't have the originals:

<http://www.sebelinteractive.de/scummvm/>

# Radeon Drivers

Drivers for ATI's range of powerful 2D/3D Radeon graphics cards are coming for both OS4 and OS3.x and a suitable PCI bus board. Bill Toner of Forefront Technologies is working on Picasso 96 and Warp3D drivers that will initially support the original Radeon RV100 chipset with support for the newer RV200 coming later. Matay's Prometheus will be the first PCI bus board supported as it is being used as a development system, the Amiga One will be supported when it is released and the developers are keen to support other PCI buses if the relevant developer information is available. The drivers are likely to be a commercial product, Bill advises users not to buy a Radeon card in advance as the drivers may only be sold in a bundle with a card in order to pay the development costs and avoid piracy.



## SimpleMail 0.14

Since Mick's review in Issue 9's PD Paradise section two new versions of Simple Mail have been released and the latest, 0.14 is the first to be declared a beta release. The key new features in 0.14 are:

- Lots of new AREXX commands.
- Automatic deletion of signatures when replying.
- Folders containing new mail are highlighted in bold.
- YAM address book import.
- CC: support in the compose window.

Download the latest version from: <http://simplemail.sourceforge.net>



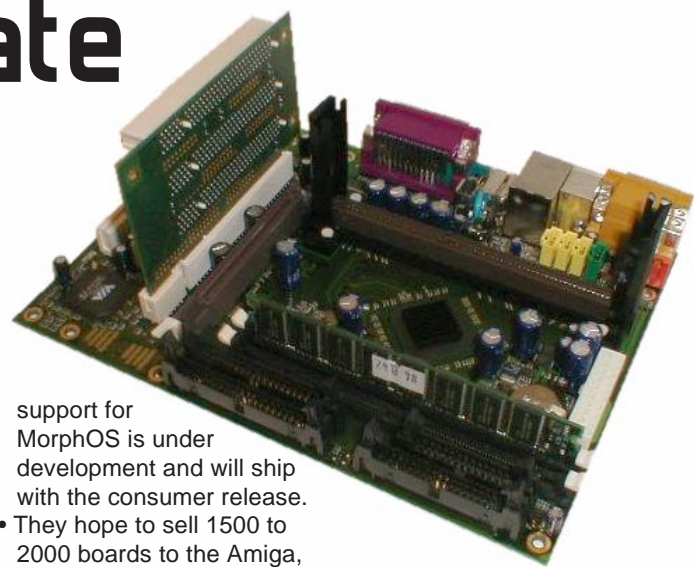
# Pegasos Update

bplan showed a working version of their Pegasos PPC motherboard running Amiga programs on MorphOS at the Amiga 2001 show held in Cologne, Germany last November. The board shown had 3 PCI slots, 1 AGP slot, and room for 2 133Mhz SD-RAM DIMMs giving up to 2Gb of RAM, it also features audio, USB, Firewire and network ports built-in minimising the need for add-on PCI cards.

In a recent IRC chat session Salvador Fernandez Gomez of bplan answered questions about the Pegasos and

MorphOS, some of the most interesting points were:

- Developer motherboards should be shipping as you read this and consumer boards should be ready by the end of March.
- A bare board will cost 650Euro (about £400) with a 400Mhz G3 CPU and a complete system with DVD drive, hard disk, memory and case but no monitor should be about 1000Euro (£625).
- All systems will be supplied with MorphOS, a compatible PPC Linux distribution will be available for download.
- The board has on-board sound with analogue and SP-DIF digital output.
- Open GL (a popular 3D graphics API used in many games and applications)



support for MorphOS is under development and will ship with the consumer release. They hope to sell 1500 to 2000 boards to the Amiga, Linux and industrial in the first year. Drivers developed for the G-Rex will run on the Pegasos without recompilation.

Salvador also said that the bplan website will soon be

updated with all the new information so take a look at: <http://www.bplan-gmbh.de/> for hardware information and: <http://www.morphos.de/> for software details.

## MUI Internet Programs Security Problem

An important security hole has been reported in some MUI based Internet programs which could allow an attacker to run programs on your Amiga by sending an EMail or ICQ message or embedding malicious code in a web page. The problem stems from MUI's powerful text formatting commands which allow images to be embedded in a string of text in an interface, this is done using non-printable escape sequences. If a MUI program displays strings of text from the Internet (for example in an EMail title, ICQ message or webpage) without stripping escape sequences then it is possible for an attacker to embed escape codes in the string and cause MUI to try and open a file.

Normally this would not cause a problem however several third party pipe utilities including APIPE: (supplied with AmiTCP and Genesis) and AWNPipe: (supplied with AWeb and used by some utilities) allow a program to be run by accessing a "virtual" file. Therefore if a user has a

vulnerable MUI program and one of these pipe devices mounted it is possible for an attacker to construct a string that, when displayed in the application, will run any program on the user's system. The attacker would need to know where the command file was located but of course it could be a standard command like delete or format!

Since this issue was publicised many MUI based Internet programs have been updated to close the loophole, this includes popular programs like YAM, Simple Mail, STRICQ and NewsCoaster. Vaporware have reported that all their Internet programs are already designed to avoid the problem. If you use any MUI based Internet programs it would be wise to check with the author or publisher to see if updated versions have been released and if so upgrade.

You can read the full detailed report at: <http://www.abraxis.co.uk/SA-2001-11-08.html>

## Quake Again!

As they did with Doom and the original Quake, ID software have released the source code to Quake 2 under the GPL (GNU Public License), in simple terms this means that anyone may download the code, compile it to run on different systems and make changes providing they make their changed code available. Unlike the original Quake release there hasn't been a flurry of quick ports of Quake 2 to the Amiga but Steffen Haeuser has announced he is working on a port along with Hans Jeorg and Thomas Frieden. All three of these guys work for Hyperion and have been responsible for porting many excellent games to the Amiga. In a recent Interview with German on-line magazine Amiga.topcool Steffen said their port is nearly complete but he is working hard with some beta testers to make sure the end result is of commercial quality, including a proper installation utility and setup GUI familiar from Hyperion's commercial games. One interesting aspect of Quake 2 is that many mods

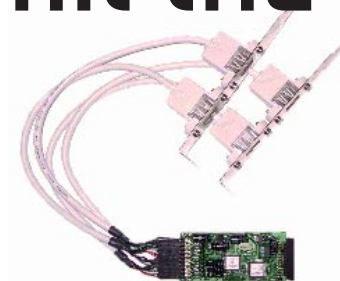


Quake 2 running in a Workbench window.

were released for the game, some of which change the game play completely, however unlike Quake 1, Quake 2 mods will have to be recompiled to play on the Amiga. To play Quake 2 you will need a copy of the PC version because the game data files (PAK files) have not been freely released, it is also likely to require a PPC accelerator and we usual we're sure a 3D graphics board will make the world of difference. Some early screenshots of Quake 2, including 18 showing mods that have been recompiled for the Amiga have been released on Amiga Extreme:

<http://www.amigaextreme.com/>

# Hit the Highway or take the Subway?



German company E3B have announced two hardware products that will bring the Universal Serial Bus (USB) to most Amiga systems. USB is a very popular way of connecting low speed peripherals such as scanners, mice, keyboards, printers and digital cameras to computers and is widely supported on both the PC and the Mac. USB has many advantages over parallel and serial ports, multiple devices can be connected either by daisy chaining or using hubs, it

supports hot plug so devices can be connected and disconnected while they are switched on and it is simple and cheap to manufacture. E3B plan to offer two models of their interface the Subway which connects to the A1200 clock port or compatible ports on many other devices and the Highway which is a Zorro II card for big box Amigas and expanded A1200s.

Both interfaces will feature:

- USB 1.1 and 2.0 compatibility but no 2.0 highspeed mode.
- Integrated 4 port hub.
- Software compatible with AmigaOS 2.04 to 3.9.
- Two year warranty.



The Highway Zorro II Card.

The Zorro card also has a header for future expansion modules and upgradeable firmware.

As we have mentioned before getting USB hardware support is only part of the battle, E3B have teamed up with VMC (the people behind Hypercom I/O cards amongst other things) to develop software for their boards, drivers for keyboard, mouse and printers (we assume they will provide a "USB.device" so existing printer drivers can work over USB) are planned for launch

with more to follow. E3B recently ran a survey asking potential users what drivers they would like to see developed, digital camera and scanner drivers topped the chart of requests but E3B warn that different manufacturers don't use a common communication protocol so it won't be possible to write a "one size fits all" driver for these products.

E3B have done extensive testing of both Subway and Highway on different busboards and working along side other Zorro cards. They plan to publish compatibility lists with USB peripherals as soon as possible, you can check out their results and get more information at:

<http://www.e3b.de/usb>

## More Ins and Outs!

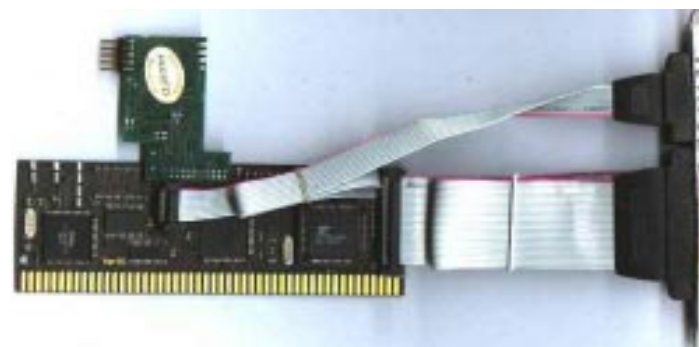
Individual Computers have released a new I/O board with two serial ports and one parallel port. The serial ports are equivalent to the highly praised SilverSurfer and can run at up to 460800bps with a 16byte FIFO buffer to reduce load on the Amiga. The parallel port has been improved over Individuals previous Hypercom boards, it also has a 16byte FIFO buffer to reduce CPU load and supports ECP mode which Individual claim speeds up modern printers.

However the really clever thing about the VarIO is that it is designed to work in as many Amiga configurations as possible, the board has a clock port, a Zorro edge connector and a 26pin expansion port.

This means it can be connected to an unexpanded 1200 or other device with a clock port, to the expansion header on one of Innovative's other products such as the Buddha or X-Surf and it can run in any Zorro II compatible slot. But that's not all, when the VarIO is used in a Zorro slot the clock port and expansion port can be used to connect expansions using those ports to the Amiga!

The VarIO costs 49.00Euro which is about £32, there is a 10Euro (£6.50) surcharge for the A1200 version. Further details including a detailed installation manual can be found at:

<http://www.jschoenfeld.com/>



## OS3.9 NDK

The AmigaOS Native Developer Kit that was released on the Amiga Developer CD 2.1 has been updated for OS 3.9.

The 'C' and assembly language header files have been updated as have the linker libraries, Autodocs and Workbench AREXX documentation. The 'C' header files were cleaned up and syntax checked so they compile cleanly with both SAS/C and GCC compilers. The work on the NDK was largely carried out by Olaf Barthel.

Download the updated kit from: [www.amiga.com/3.9](http://www.amiga.com/3.9)

## 100% Amiga Update

100% Amiga, the CD based Amiga magazine from Forematt Home Computing and Epic is now on its twentieth monthly issue. The magazine includes news, reviews and tutorials all presented in a multimedia format, many with spoken voice over. The original interface to the magazine was designed with CanDo which caused problems on some Amigas, particularly those running 3rd party utilities like MCP and Directory Opus 5. The publishers are now introducing a new interface based on Scala which should be more compatible, we tried it on a heavily expanded A1200 system and it worked well (although it doesn't work on a graphics card so you'll need access to your AGA output). [www.100percentamiga.org](http://www.100percentamiga.org)



# AmigaOS 4 Update

At last things seem to be happening on the OS 4 front! As you can read in our World of Amiga South East report, Alan Redhouse and Fleecy Moss of Amiga signed a contract at the show on the future development of the AmigaOS. The other party to that contract was Hyperion who will be co-ordinating the software development, initially for AmigaOS 4. Unfortunately it seems that before this contract had been signed little or no work had taken place on the core of the updated OS, mainly due to the very hard economic conditions in the technology sector.

Since the show Hyperion reports that OS development is now well underway with 4 full time developers and a further 20 or so part timers working on it, including most of the OS3.5/3.9 team. One interesting announcement that really ties this new version back to the Amiga's roots is that Dave Haynie (one of the key Amiga designers at Commodore) has taken on the role of technical consultant in part to share his knowledge of the PPC processor. Quite a large amount of information on OS 4 has been made public in the form of announcements and interviews, in this report I have tried to summarise that information and the current state of affairs as far as we know them.

## Hardware Support

For many Amigans the best piece of news about OS4 (apart from the fact that it's actually being developed) is that it will now support a wider variety of PPC hardware. The OS will be based on a hardware abstraction layer (HAL) which means that only a relatively small part has to be altered to make it work on new

hardware. First up the original CyberStorm PPC accelerators and almost certainly their Blizzard PPC cousins will be supported (Ben Hermans of Hyperion said they are 99% sure the BlizzardPPCs will work) this means many existing users will be able to try OS4 without investing in additional hardware. Elbox have already expressed an interest in OS 4 support for their Shark add-on PPC processor card for the Mediator PCI bus and from previous agreements announced with Amiga it seems likely that the proposed PPC solution for Matay's Prometheus PCI card will also be supported. Then we have the dedicated motherboards, of course OS4 will work on Eyetech's AmigaOne and there is also good news on the Pegasos front, Ben Hermans has said that Hyperion have ordered the developer kit and plan to support bplan's new PPC motherboard.

## Structure of the New OS

The aim of the first release of AmigaOS 4 will be to move existing Amiga users and hopefully some ex-users on to the PowerPC processor which offers much higher performance than the 68000 series processors used in most current Amigas. Unlike running a PPC card under the current OS version 4 will only use the PowerPC, existing 68k programs will be supported by an emulator. The emulator will use just in time (JIT) compilation to run existing programs at high speed which should exceed existing 68k processors in many cases (although it will depend on the speed of the PPC used). The OS will be ported gradually to PPC with the important aspects mentioned here being made PPC native in this first release. Other parts of the OS will run

under Emulation initially and be ported in future releases.

OS 4 will be based on a second generation version of the Amiga's kernel Exec, called ExecSG. The kernel is the heart of the operating system which controls multitasking and memory allocation, new features of the ExecSG include the HAL mentioned earlier, virtual memory, new library interface, resource tracking, optional memory protection and WarpOS backwards compatibility. Before you jump up and down at the dreaded words virtual memory remember that this doesn't necessarily imply swapping memory to disk or the poor implementation that is found in windows. On the other hand as I understand it, it should mean an end to memory fragmentation! Some features like memory protection will only be available to new programs but as they are developed it should make AmigaOS more stable and crash proof.

## New Features and Improvements

Intuition, the Amiga's basic display system which handles screens, windows and the like, is being upgraded and made PPC native, the upgrade will include enhanced window borders with user-selectable gadgets and support for external plug-ins. In addition both the basic gad-tools and the new Reaction GUI building systems will be upgraded and made PPC native which should make the whole interface more snappy and reduce the amount of load put on the 68k emulator.

A new version of the fast file system (FFS) has already been developed for OS4 again PPC native and supporting hard drives bigger than 4Gb and

filenames up to 108 characters in length. Complementing the new file system will be a set of disk salvage and optimisation (which were lacking in OS3.5 and 3.9) and a replacement for HDToolbox. Another important piece of new software included with the OS is a new TCP/IP stack developed by Olaf Barthel. The stack will be compatible with existing network applications, network address translation (NAT) will be supported allowing users to share a network connection and it will include DHCP and PPP over Ethernet which is important for cable modem support.

## Hardware Support

The OS will include a new retargetable graphics system developed by the Picasso 96 team and a new version of Warp3D, drivers for Permedia 2/3, Voodoo 3, Matrox G450/G550 and ATI Radeon graphics cards are planned and existing Zorro cards will be supported (in machines which have Zorro slots!). The popular OpenGL 3D API will also be supported. Basic USB support will be implemented but it is expected to be limited to keyboards and mice in the first release. Retargetable audio will be supported by a new PPC version of AHI which will be support sound cards including all current Amiga soundcards and the Soundblaster 128 and Live. A driver will be provided to support SCRIPTS based SCSI controllers, I believe these are the NCR/Symbios/LSI Logic SCSI chips already used on many Amiga controllers including the Blizzard PPC and CyberStorm PPC. You can also buy PCI SCSI cards based on these chips for systems which don't have a SCSI controller.

Overall this seems like great news to me, the Amiga OS is in the hands of a company who have proved themselves to be professional and to produce quality products. The new features proposed are exciting but also seem realistic and achievable, not just a pipe dream. We'll have a choice of hardware depending which should suit most tastes (and hopefully pockets too)!

## So, When's all This Due?

When their development of OS4 was first announced Hyperion stated that they hoped for a release this February however that has now slipped a little mainly because more features are going to be incorporated into the first release. As I write this at the end of January the latest news from is that they still hope to make a developer release in February and users should get the new OS a few weeks later. So I would imagine we should start getting excited sometime in April!

As we seem to say so often in the Amiga world, we'll just have to wait and see but this time the signs look good.

## Where Can I Find Out More?

At this time there isn't a dedicated OS4 website so the best bet is to surf around the news sites and see what is being reported. For this article my main sources were Hyperion's OS4 development update posted on <http://www.ann.lu> on the 21st of January and Ben Hermans' interview with Boing Attitude at <http://glames.free.fr/>

# Fleecy Speaks

*Fleecy Moss, Amiga Inc's Chief Technical Officer, starts a regular column in Total Amiga. This time he focuses on Amiga's broad strategy for fulfilling specific requirements and updates us on recent developments.*

Rumour has it that when Commodore finally got hold of the Amiga, they were so amazed by what it could do that some bright spark in marketing hit on the idea that they could sell it as the machine that could do anything. Unfortunately people didn't want machines that do anything, they wanted machines that did very specific things. As a result Commodore let the markets come to them when third parties saw solutions (Newtek with the toaster/flyer, Game companies etc) rather than going out to the market and showing it solutions. Amiga thus triumphed in the niche markets where it was the best solution, in the hearts and minds of those who understood technology, and in the fickle but fun market of entertainment. Unfortunately, it completely missed the markets that went on to define computer usage, business and education.

Now the world has moved on again. The two stage technology cycle is shifting from innovation to maturation. The computer as a hard to use, rudely exposed piece of engineering is sinking into invisibility as it becomes a mere commodity for consumer needs. The true story, the true purpose of this revolution is becoming apparent – human activity moved from the physical realm to the digital realm with the task, not the implementation being the most important part of the process.

Amiga has coined a phrase for this – 'Digital Living', an arena in which there are not PDAs,

Cellphones, Intelligent TVs, Games Consoles, PCs but just digital devices, in which there aren't various esoteric file formats with arcane extensions but just pictures, films, documents, games; digital content. It doesn't mean abandoning what you want to do, or having it dumbed down so that it can be shoehorned into the convenient package of mass marketing. It means a total solution, finally to all the computing requirements of the individual, the family, the institution.

This total solution covers all the products offered by Amiga. The AmigaDE is moved forwards at great pace, with over 50 applications, thousands of developers and attracting the attention of many of the biggest companies as it looks for futureproof solutions to their present day problems. The AmigaOS, under the project management of Hyperion Interactive, is also moving forwards, making that long awaited move from 68K to PPC, not just as a mere emulation of the past, but as a vibrant, hungry, radical new member of the most up to date technology circle. In parallel, Eyetech Ltd are building the AmigaOne, a brand new, ultra modern PPC motherboard using only the latest of technologies. After so many years waiting, after so many false starts, 2002, will be the year that Amiga reintroduces the world to elegance through simplicity.

My theme through this letter has been 'total', and for the Amiga this has also meant not just technology but community, the trinity of owner, developers



*Fleecy gets Clubbed at Alt. WoA last year.*

and users. In that regard, this magazine that you have purchased is not just a telling testament to the total solution of Amiga but also to the belief, dedication and passion engendered by the vision of the Amiga itself. With the last english magazine departed for other pastures, only with Amiga could a group of normal, everyday guys and gals decided to move their already excellent user magazine up a notch and take its place. I am delighted to be writing in the first issue of Total Amiga, and if I had a bottle of Champagne I would smack it over the heads of the whole team whilst speaking in a nasal voice and wearing a silly hat. This launch is a wonderful triumph not just for the SEAL group but for all Amigans everywhere and I urge you to support it wholeheartedly.



# Getting into Print

*The magazine faced a crisis last year when our usual printer was unable to continue production, Sharon Sutton stepped in to find a replacement. Here is her take on the trials and tribulations of getting an Amiga produced magazine printed at a reasonable price, hopefully the result you see here was worth her efforts!*

Taking on the task of finding a new Printer for our magazine, and thinking it was going to be easy, was a bit presumptuous of me, especially when I didn't really know a lot about the printing business, well if I'm honest my knowledge was non-existent!

I didn't tell anyone that I was taking on the task, it just sort of happened! I was walking past a well known printing shop when I thought I would give it a go. My first mistake was that I had my two young children in tow, not a good idea when you are trying to explain about the magazine and sounding knowledgeable at the same time!

As I entered the shop I was greeted by a man in his twenties, I explained to him about our magazine, then went on to tell him the amount of copies that we needed, inside black and white, front and back cover to be in colour etc etc. He gave me a rough quote but said that he needed to see the magazine before he could give me a final quote. Second mistake, it is a good idea to take all the material to show the printers! (Well I did say I was just passing the shop) I told him that I would return the next day with the magazine. The quote he gave me was lower than our previous printers, could it be this easy!

Before returning to the shop, I got a technical low-down on the magazine from Robert. The next day I dropped the kids off at playschool (yipee!) and armed with the magazine and all the technical jargon I was off to the printers. This time I was a lot more confident and told the assistant exactly what we wanted, he flicked through

the magazine, he looked quite impressed with the quality, then came the dreaded word! "Is it done on a PC then" "no" I said smiling inside. "Mac?" "No on an Amiga" I replied quite matter of fact. "Is that a PC then" he said. Now how would you reply to that statement? No don't tell me... In a split second all these scenarios were whizzing around in my head, should I explain to him what an Amiga is? Should I go into all the capabilities of the Amiga, as I looked at this man in his twenties all I could see was a blank expression on his face so I replied with "er no" short and sweet I know, but what I really wanted to say is not printable! After taking into account what we required, the final quote then tripled, I looked in dismay, then I thought I would try on the charm by asking for a discount as it would be a regular printing job, but I was turned down, was I losing my charm, or was he telepathic on the Amiga front!

I was feeling abit dejected as I left the shop, but I was not going to give up, I was quite enjoying my challenge, I felt like a Watchdog journalist whose mission was to find the best Printer to do the job at a competitive price!

My next port of call was a local Printing Company, I phoned first to explain about the magazine and made an appointment (I was getting more professional!) Once again I picked a time when the kids were at playschool (I'm learning!) As I entered the printing shop, it was like embarking into a time warp, it was really old fashioned and dingy, an older man greeted me, someone who had clearly been in the printing business

for years. He looked at the magazine then promptly erupted into technical jargon that I had never even heard of, should I bluff my way through or disclose to him that I didn't have a clue what he was talking about, I decided on the latter. After unmasking my lack of technical knowledge he very kindly explained to me the printing process. Unfortunately the job was too small for him and he quoted some ridiculous price. After thanking him for his time I left.

This was proving more daunting than I first thought, I started to look through the Yellow Pages, there were lots of Printers but they were based out of town, I wanted a printer that was in walking distance, could do the job at a competitive price and didn't go white with shock when I mentioned the Amiga. I'm not that demanding, well maybe sometimes, but that's another story!

As I was flicking through, I noticed a Printers that I had used years ago when I wanted to start up a secretarial business, I had my letterheads and business cards printed there, was this too much to hope for.

After the usual rigamarole I found myself standing in a printing environment once more. After the last two printers I found myself much more confident almost to the point of being brusque.

Following my carefully rehearsed lines, the printer looked disinterested but interested at the same time! Was he playing me at my own game? I took the game further and asked him for a quote, he quoted me about £150.00

above which we were paying our previous Printers.

I thought to myself that there was room for improvement. I started to haggle (this is Sharon territory). After haggling and conjoling for about ten minutes, he eventually brought his price down, (I've cracked it hooray hooray!) but I was brought back down to earth when he said "which platform is the mag done on" "an Amiga" I said in a meek voice. He then went on to say that he needed the output on the cd rom to be in PDF or EPS format, I told him that this was not a problem, he wasn't convinced, it took me quite a lot of persuading but eventually he was assured. I left the magazine with him over the weekend to mull things over and he would give me a definite answer on the Monday.

As I walked out of the shop I was walking on air! I had actually found a printer for the magazine, and within a week. After breaking the news to Mick and Robert they both seemed pleased.

When Monday arrived I was feeling a bit apprehensive would the deal fall through, would I have to start my search all over again. I felt like I had a lot to lose (well my pride anyway!) I asked Mick to go back to the Printer for me as I wasn't sure I had ironed out the problem about the Amiga. After having a boys tete-a-tete (like only men can) The deal was sealed.

The moral of this story is... do your research, never take children with you and haggle like mad!

# Saturday the 23rd February 2002

From 11.30am to 5.30pm.

Large free car park ~ restaurant and bar facilities  
Easily accessible from all parts of the UK



**The Old Corn Mill, Huddersfield, is again the venue for this year's Alt~WoA. We have 3 floors of attractions which include The Amiga Arena / Workshops on Audio from Dox Cox / Networking with Samba from Neil Bothwick / Amithlon with Bill Hoggett / Games Area with another great Sensi~Soccer Competition / Neil Bothwick's Cybercafe with Amiga PPC based computers / ZeoNeo demonstrating their latest creations for AmigaDE / Computer City with Audio Evolution as well as the very latest version of their own development MediapointRTG software. We are still also in the process of organising a further Workshop feature. The usual suspects from the Amiga User Group scene will be there along with Amiga Inc., Eyetech Ltd., Classic Amiga, Weird Science, DatatechDTP, ForeMatt Home Computing, Kicksoft, Cloanto, Stellar Dreams, ZeoNeo, Computer City and, commitments permitting Ben Hermans of Hyperion.**

If you attended last year you will know just how enjoyable the Show was ~ if you didn't, you must have heard about it so come along and meet like minded people from all over the country. Visitors came from the very tip Scotland and the UK as well as all points between and had a thoroughly great time ~ we know because they told us!

Our Website at [www.alt~woa.org](http://www.alt~woa.org) has all the latest news and is currently being updated almost daily. If you don't have Internet access and wish for more details, please find further details below or use the contact numbers. There are some things we don't know ourselves yet!

## DIRECTIONS

The Old Corn Mill is literally 1 minute away from junction 25 of the M62 on the A644 towards Huddersfield / Dewsbury ~ first building on your right. From Huddersfield, follow the A62 (Leeds) road until reaching a left turn onto the A644 towards the M62 ~ approximately 1 mile on your left.

## Public Transport.

Take the train to Dewsbury and then from Dewsbury Bus Station (almost opposite the railway station), take No.279 bus to Brighouse via Clifton. Buses are every half hour during the day on Saturdays.

Contact Geoff Milnes ~ 01484 322101 Paul Smith ~ 01924 518527  
Malcolm Walker ~ 01484 6664781



# AmiMPC

## Amiga MPEG Car

Paul Quershi: "People said I was mad. An Amiga in a car. Okay, so maybe I was."

The idea originated back in 2000 when Napster was still all the rage. Having converted all my own CDs to MP3 format, and having downloaded gigabytes more, I was convinced. MP3 let me have all my music in one place, on tap instantly. Unfortunately, I only had a radio in my car, and Portsmouth is sadly devoid of any good stations. There was only one thing for it, I had to have MP3 in my car.

Looking around, there were no good solutions. MP3 players of the day were expensive, and limited to 32 or 64MB SmartMedia cards. Amiga compatibility was non-existent. Even now, CD MP3 players always seem to lack a good display (accessing 1000 tracks sequentially is not a good idea) and the cheapest in car players are even now £450. However, one thing I did notice was that a few brave souls had converted their computers to use as in car players. Mostly they used PCs, and the odd Mac. Most were hacks to say the least, requiring you to carefully shut down Windows when you stop and taking up large amounts of boot space. The second issue was a major one for me, having only a small Suzuki Alto, I needed all the

boot space I could get.

So, I started to look into what I would need. Firstly, I decided I should use an A600 (because of its small size) and MAS Player as the heart of the system. The MAS Player is a device invented by my great friend and respected hardware engineer Dirk Conrad. It connects to the parallel port and uses a MAS3507 DSP to decode MP3s. This takes the load off the computer's CPU and gives a nice 18bit stereo output. I had been working on an MHI driver for the MAS Player at the time, so it was the natural choice. The only downsides are that the volume control doesn't work very well, and that it uses the parallel port, and due to the way the interface works you need at least an 030 to run it comfortably. Still, that's better than needing an 060 and a sound card.

I would need a dash mounted head unit to control the system, and to display information. I was considering using a small portable TV screen for the latter, but settled on an LCD character display. The unit I chose is produced by Crystalfontz in the US, and can display 20x4 characters (of which 8 were programmable and the rest were standard ASCII characters, plus some Japanese script). The device also features adjustable contrast, an LED back-light and some built in utility functions like automatic bar graphs and horizontal scrolling. All this can be controlled via an RS232 serial interface, of the kind used for connecting a modem to your computer. The display works a little like one of the old text terminals used for



The head unit that will be mounted on the dash with LCD display and volume control.

accessing Bulletin Board systems, many years ago, so is very easy to handle. The fact that it uses the serial port also meant that I could keep the parallel port free for the MAS Player.

Inputs for the system were a little bit harder. I was thinking of using a CD32 game pad, but this wouldn't have been very easy to use while driving. Then I came across a little project on the internet called the Universal Infrared Receiver, or UIR. This handy little device uses a PIC 2C508 microprocessor (2K ROM, 64 bytes of RAM and a 4MHz RISC CPU all on a chip smaller

than the end of your finger) to read and decode IR signals for standard remote controls, and send them via RS232 serial to the computer. The advantage of this over a device like the AirLink/EZLink is that the PIC does all the work, taking all the load away from the computer. Also, since the display was output only and the UIR input only, I could run both from one serial port! I liberated a credit card sized remote control from an old Soundblaster Live, which had plenty of buttons and suited my purpose nicely.

The Amiga was going to need some kind of mass storage unit. A CDRom was an option,

but skipping might become a problem unless it was a special laptop drive. I was fed up with CDs anyway, so in the end decided to use a 2.5" hard drive. Since these drives are designed to be used in laptop computers, they are fairly immune to vibrations and bumps. The drive I chose would need to be, to survive being driven around Portsmouth roads! I initially used a 2GB Hitachi drive, but I now have an 8GB IBM. That gives me over 136 hours of music!

The final problem was the power supply unit, or PSU. Cars use a 12V battery supply, which is supplemented by the engine via an alternator. However, it's not that simple, because cars can not only put out up to 14.5V with the engine on, but also tend to produce a lot of electrical noise in the supply. For a computer, this is a real problem since any major fluctuations can crash it, or even do damage.

After much research and a prototype, I eventually came up with a working design. It was based around a switch mode supply circuit, similar to the sort of thing you might find in any number of consumer electronics devices, battery, DC or mains AC operated. This supplies the core 5V to the Amiga. For the 12V line, which is not nearly as critical, I used a simple 12V fixed regulator chip, and a voltage inverter to get -12V from that. All in all, the PSU can supply around 45W of power, more than twice the original A1200 unit. Many thanks must go to Ian Greenway for help here, I really appreciated his help.

Well, having figured it all out I only had to build the thing and write the software. This turned out to be quite a bit of work, and I suffered many set backs. The software was designed to be simple and easy to use, as you don't want to have to negotiate complex menus or key presses while driving. Really, a basic stop, play, next and previous track system is all you need most of the time. Of course, with around 2300 tracks on the system, it is



The main unit containing the A1200 with removable hard disk and power supply attached.

necessary to organise them some way for selection, so I decided to have two grouping systems. Firstly, the software can select tracks by directory on the HD. This is mainly used for selecting either a band or a genera of music. Secondly, you can create play lists of tracks, just like you can in AmigaAMP or WinAMP (in fact, they are all compatible), which are designed for setting up complete albums and favourite tracks lists. To round it all off, I wrote a preferences section with options to set bass, treble, panning, display contrast, and some other misc parameters.

I went through two versions of the software before I had it perfect, and spent about a month tracking down an obscure but regular guru inducing bug (for which many thanks must go to Przemyslaw 'Sensei' Gruchala for being the first to figure it out). I had to drop the A600 in favour of an A1200 too, because the 030 card I had for it simply could not provide the throughput I needed to the custom chips and parallel port to run the MAS Player. Some more optimisation of the MHI driver may help here. To house the A1200, I built an aluminium case from and brushed it to look nice. While I was at it, I also soldered on the A1200 PCMCIA reset fix, removed the floppy drive and used hot melt glue to hold down any loose connections. I also made a caddy for the hard drive, which allowed me to connect it to either the A1200 or my A4000

(so I can copy MP3s on to the drive) via 44pin d-type connectors. That alone was a total of 132 small solder joints in a very confined space, and was probably the most work to construct.

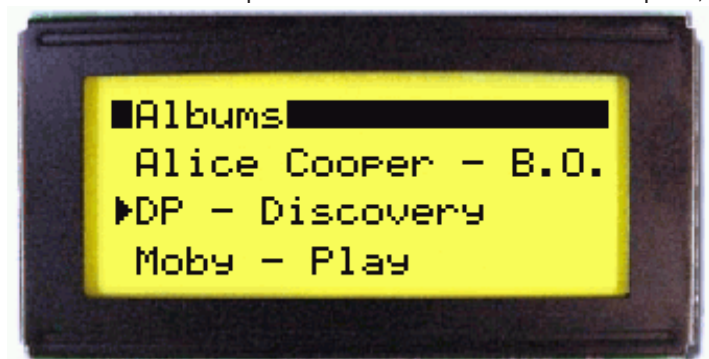
I spent days installing it, wiring my car with serial and data cables, power relays and switches, and then many more weeks tuning the audio side up. I fitted a 400W amplifier to my car, and with some help from Paul Harding and Mike O'Hara, friends from the Amiga Support Association, added some extra speakers. Finally, I installed the A1200 itself and the head unit I had made with the display, and it was finished!

Now I drive around everywhere with my favourite bands pumping out, and all from an Amiga 1200! Needless to say, the feeling of achievement and pride is amazing, and I encourage anyone interested to give it a go. I put all the details of the project on my web site, including software and schematics.

I still have some plans for the future, as I'd like to do a better head unit (the one I made is a little larger than a normal radio) and I have a few ideas for software upgrades. MOD and Octamed playing capability is a possibility to. But for now, I just enjoy the look on peoples faces when I show them my in car Amiga MP3 player!



MASPlayer does the hard work of MP3 decoding.



The LCD display in use.

## Review Scoring

For Total Amiga we've taken a look at our review scoring policy but decided to stick with five simple ratings rather than going for a percentage or out of ten system. Because the usefulness of a product very much depends on you, the user, we would far rather you read the review and used the information provided to see if it satisfies your needs.

You might logically now ask "Why have a rating system at all then?". We think it is still useful to have an overview of the product, for example often it is necessary to explain a product's shortcomings and in a review, with limited space these can seem to overwhelm the good points. The rating allows the author to say, I still think it's a good product despite its flaws. So here are our new ratings:

### Top Notch!

This is an excellent product which we feel is nearly perfect. At must have product if you're interested in the genre.

### Pretty Good

A good product that works well but has room improvement. Definitely worth buying.

### Okay

A product that works but has areas that could be improved. Could be worth purchasing if you can accept the limitations.

### Could do Better

A product with major flaws that has potential to be improved. Only worth purchasing in this state if it's your only option.

### Forget It!

What can we say, steer clear, this is a product that should never have been released.



**Developer**  
Elbox

**Distributor**  
Power Computing  
www.powerc.com  
01234 851500

**Price**  
Logic and MMCD....£169.95  
Busboard, logic and MMCD  
.....£269.95  
Tower, busboard, logic and  
MMCD .....£379.95

**Compatibility**  
A4000 Desktop

**Test Systems**  
A4000D  
PowerTower MkII  
CyberStorm MkII 060

# Mediator 4000

*Elbox has made Sam Byford a happy chappie... at last*

## First a bit of History...

When the Mediator PCI expansion system was first announced by Elbox, I was as excited as everyone else by what it would mean for us Amiga Die-hards. At last - Fast, easy-to-find, and above all - Cheap PCI cards that could be used in our 10 year old machines!

At the time I had two machines: an A1200 (Towered) and a Basic A4000 in a desktop case. I was still at university and did not have the sort of money needed to buy a 1200 Mediator so instead, when my Friend Sam Thomas (The author of [www.amiga-mediator.co.uk](http://www.amiga-mediator.co.uk)) bought himself an A1200 Mediator, I bought his old Ateobus system off him which was a good half-way compromise! A short time after the 4k version on the Mediator was announced I made a decision to start getting the 4k up-to-spec and promptly paid out the money for a Power Tower mkII from Power Computing that came complete with a totally new daughterboard with six Zorro II/III slots, a Graphics slot and five PCI slots - one more than our cousins the 1200 had! (the sixth PCI slot would be taken up by the Mediator Logic Board when released).

Almost a year later and the 4k Logic has Finally been released. To be honest - this is the biggest fault with Elbox/Mediators - everything takes much longer to appear than they predict. I have heard rumours that the logic had been ready for a long while but that Elbox did not have sufficient pre-orders to want

to release it (they told me it would be released back in October), which in my opinion is a bit naughty, the 4k does not have as many users but the best way to guarantee extra sales is to release things for it so that they can be reviewed and the other users know it is worth buying! I expect this review (and the others that will doubtless appear) to boost Elbox's sales three fold!

## Initial Impressions...

So what was in the package? Well, let me first say that I ordered the logic off of PowerC along with the update MM CD that allows the latest Sound and TV cards to be used. This CD comes with some new "Mach" chips which you have to swap with certain ones on the Logic Board. However, thanks to Power the Logic came with the new chips already installed so I did not have to touch a thing on the board itself. Everything came in a plain white box (no fancy cover that would make it look nice but would also add to the cost) with the Logic wrapped in a Bubble-wrap envelope. There's a six page leaflet included guiding you through the installation, even though it's pretty straight forward!

There are three jumpers on the board, one of which is obsolete until such time as the SharkPPC(+) comes out. The 2nd is in case you have a Voodoo4/5 card and the third in case you want to leave a Zorro II/III gfx card installed. If you leave this open (no ZIII card) with a Zorro GFX card installed then when you boot you will go into AGA mode rather than the ZIII gfx mode.

Both the Daughter Board and Logic are well built, however, the Power Tower's interaction

with the PCI cards is another matter entirely. I may have just been unlucky but another 4k Mediator user I spoke with has the same problem as me but on a lesser scale and he can get away without changing anything.

The problem is that the PCI cards will not push fully into their slots because the Fixing plate hits the Towers Back-plane slots. This is shown in the picture below:



Basically, if the screw hole lines up then the right hand end of the card pops out of the slot (with the left end barely locating), and if you push the card fully in then you can't screw it in secure and the left side is still not fully located. The only option for me was to remove each fixing plate from the card, use a hammer to flatten the right angle out then bend it back into a right-angle but 1 mm further towards the end. This of course meant that the hole for the screw to fit through was out of alignment so I had to file that back so that everything fitted again. The five cards I have only took about half an hour to alter as the fixing plates are only soft aluminium. I now have perfect PCI cards that sit in the slots 100% and are secured nicely. The only downfall is that I probably would not now be



*MooVID playing a movie playing in PIP mode. Notice how other windows can move in front of the MooVID window border but movie stays at the front of the screen.*

able to re-sell those cards but as I'm unlikely to want to do that its not a factor in this.

The software for the Mediator 4k comes either on a Disk or (if you purchased the MMCD - which everyone with a Mediator should do!) on CD. The initial installation is straight forward enough - one icon does the lot and all the options are easy enough to follow. It does insist on installing the sound and TV drivers together though which is unusual because if you don't have both cards then half of that part of the install is pointless!

Once this installer has finished reboot and, if like me you left a Zorro card in the machine without changing the jumper I mentioned earlier you will boot into AGA. From there you should read the Voodoo 4&5 Guide file in the "Graphics & Fast Ethernet" drawer (read this whichever GFX card you have installed as you still need to follow its instructions.) You will need to do a re-install of Picasso96 from one source or another (OS3.5/9 CD for example) choosing a Cybervision 64 3D as the "Graphics Card" type. The Cybervision Monitor Driver that is in Devs:Monitors/ will then need to be renamed to "Voodoo" and its tooltype changed from "Boardtype=Cybervision" to "Boardtype=Voodoo".

Now this all seems to be an awkward thing to have to do

when the installer could very well do this itself without the user ever having needed to know that it did it! I also found that the Voodoo card had to be in one of the lower slots for it to be recognised! I initially had it in the top slot (to give it air flow) but it was not recognised. Moving it to the 2nd slot meant it was recognised.

You will then need to spend the next half hour or so editing the Screenmode settings in Picasso96 mode to suit your individual monitor. Most people with a graphics card will know how to do this so I won't go into detail - except to say that the Cybervision settings have most of the modes set to "Interlaced" but you will need to untick this box in most of the cases. The other thing to note is that on my (and several other Mediator users) systems if you try to edit the 256 colour modes the screen blanks out and you cant do anything to it! There doesn't appear to be a fix for this yet and I don't know what causes it.

You should also register the mediator board And the MM CD via e-mail. I did this and received the latest two updates almost immediately. Install the MediatorUP.lha files first, followed by the MM\_CD\_UP.lha files and these will install all the latest drivers and updates. You will also be sent the new archives as and when they appear.

## Advanced Use...

So with the Voodoo up and running and your screenmode changed to a nice big 1024x768 x32bit or bigger (a size I have not been able to use since I sold the 1200 with Ateobus+Pixel64) you can move on and play with the other PCI cards that you have installed! I have got two Sound cards - a Soundblaster 128 (SB128) and a Soundblaster Live!; a 10 m/bit Ethernet card and a TV card.

A quick warning - this is where you will possibly start to pull your hair out!

A quick tip - Get hold of the program by Richard Brooklyn (Ribs) called Medication. Its available from one of several sources: Aminet; the Amiga-Mediator website or via the Medication website. (Address at end of the review) This program will make the setting up and use of all your PCI cards a breeze and simplifies the entire process.

The SB128 is a great little card and comes in so many types that most versions will work with the Mediator. Check out the Mediator website for a list of chips that work with the Mediator. The SB Live! however isn't truly supported at the moment and my computer just refuses to work with it. It's recognised by PCInfo (the program that shows information about all the cards you have installed) but it

## Getting Help

When (not If!) you run into troubles there is a wealth of helpful people and resources available on the Internet or at User-Groups.

There is an (unofficial) Amiga-Mediator list on YahooGroups that most Mediator users are signed up with. If your even thinking of owning a PCI solution you should join this (and possibly even the Prometheus list!) list in order to get a rough idea of the sorts of things you will have to solve to get everything running.

Send an e-mail to:

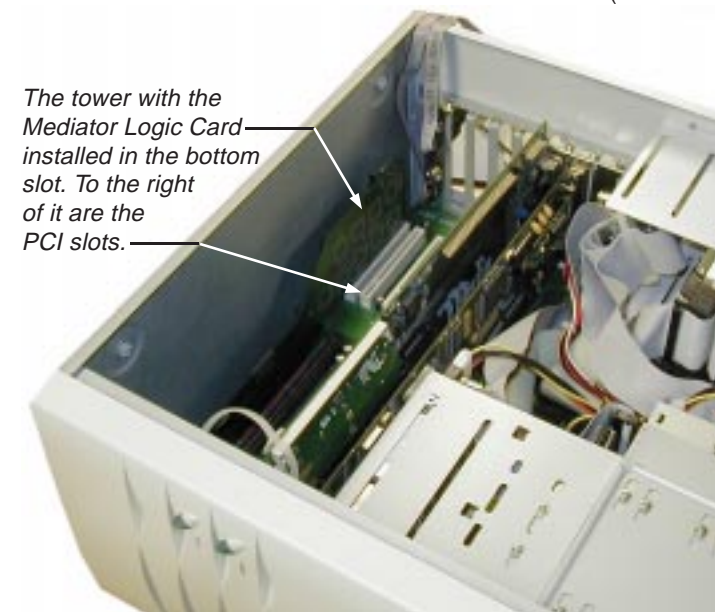
Amiga-Mediator-subscribe  
@yahoogroups.com

to subscribe to this group.

doesn't appear in Medication and AHI doesn't recognise it. And as AHI is going to be your main interaction program with the Soundcard that proves to be a bit of a problem!

If you want to hear your Paula sound though the Soundcard you will need to run a cable from the Motherboard outputs into the Soundcard either through the Jack plug or via one of the internal Pin-ports (Aux\_In). You can also plug the CD players audio into the CD\_In port. Once AHI has been set up to use the Soundcard's modes (Make

*The important bit, this is the logic card which activates the PCI slots in the Mediator 4000 busboard.*





# Reviews

sure you set Unit 0-3 as well as Music Unit) - preferably a 16bit++ mode (++ is required by some programs such as Amplifier) you can hear all your mp3's and other sound in full, glorious 16bit! And you will Never go back to Paula again!! Trust me - I had my Mum and Dad listen to the difference between normal and 16bit sound and even they were impressed!!

Elbox are currently working on drivers for more soundcards, including the Live ones and naturally I am eagerly awaiting these new drivers!! There are several programs that can help you to manage your input and

## Useful Links

- Elbox Website**  
www.elbox.com
- Amiga Mediator Site (Sam Thomas)**  
www.amiga-mediator.co.uk
- Medication Site (Richard Brooklyn)**  
www.geocities.com /richardbrooklyn/
- VGR Mediator Links Site**  
http://www.vgr.com/mediator
- ChannelEd Site (TVcard GUI)**  
www.channeled.de.vu/
- MediTV Site (TVcard GUI)**  
http://einund80.virtualave.net

**Other**  
I co-own a IRC channel with Sam Thomas called #StomsHouse which is hosted on the Arcnet server (uk1.arcnet.vapor.com or de1.arcnet.vapor.com) and in here you can find a fair few Mediator users who will no doubt be happy to help you with any problems you might have. As well as Sam "Stom" Thomas (the author of the Mediator site) you can also find Richard "Ribbs" Brooklyn (Medication) and myself on there. Please note - this is NOT a Mediator channel! Generally the Yahoogroups list is the best place to go for Medical help!

output from the soundcard: Mixer comes with the Elbox software but there is also TsiMixer and AHIRecord which will record from the Line\_In or Microphone inputs on the card. Address for these programs are at the end of the review.

The TV Card is a bit of a luxury. It basically means you can watch TV/Video/DVD on your workbench without any slowdown of the system at all. If it works. Elbox's TV driver isn't the best in the world at the moment and has been causing a lot of headaches with Mediator users. I kept getting an error popping up when I tried to run the TV program (p96PIP\_OpenTagList() failed). The reason for this is that there are not enough free pens available. To solve this go into your Prefs dir and load the Workbench program. Now set the Icon Quality to Good (and if this doesn't work, to Poor) and save. You should now have a TV window open when you run TV with a bar of static in it!

Also, once you have the TV driver working and opening a window you have a Very hard slog ahead of you to tune it into your local channels. The CD actually has a lot of pre-tuned channels but none of them showed anything but static when I used them.

Good news is on its way though in the form of the new version of Medication that is due out as we go to print. It will help you set the channels up and will include a TV GUI called "Remote" that will make life Much easier for everyone. Medication is not the only program designed to help with the TV channels though, there are several programs available for this: ChannelEd and MediTV. Links for both of these are at the end of the review along with links for other useful programs and sites.

The other PCI cards available at the moment are Ethernet cards. These are extremely useful if you have more than one computer or if you want to link to the Internet via ADSL. Until recently only 10 m/bit cards were able to be used but

now Elbox have released drivers for 10/100 m/bit cards. I only have a 10 m/bit one however.

At the SEAL meeting where I installed the Mediator/PCI cards and Software, I tried a basic ethernet link with Robs' machine but for whatever reason it failed to communicate. As a note though - we only had five minutes to test the card out and the Mediator has a thing about having its PCI cards in the correct order in its slots so it could just be that I need to move the ethernet card into another position for it to work. Unfortunately I have no way of re-testing the card until the next meeting as I don't have a second machine. But I know that other people have it all working fine so this is probably just a quirk of my setup!

With a Voodoo card installed into your computer you will also now be able to use Warp3D in Hardware Render mode instead of (the very slow) Software Render mode. The speed increase this will give you will make such games as Payback, Heretic II, FreeSpace, ADescent and GLQuake so much nicer to play that you truly will wonder how you ever managed with 7 fps! Its not Bug-free though and even getting all of the Warp3D demos to run can be a task in itself, but once it's working you won't look back!

### To sum up...

Whatever set up your 4000 is it can only benefit from having a PCI solution in it. You currently have either two or three choices depending on your hardware: with Cyberstorms (like mine) you have a GREX

option and all users can use Prometheus or Mediator. The problem with the GRex is that if your CPU ever goes belly up your entire system is up the creak until you can either repair the card or get a new one. The Prometheus on the other is a lovely card, and one ideally suited to those without a Tower but it kind of throws the "look and feel" of the system out of kilter (In my opinion). The thing is that because it still uses the normal Daughter Board to hold the Prometheus the PCI cards then sits in an upright position and thus don't sit with their ports through the Backplane housing. You also have to leave the Case off of the construction. Which leaves the Mediator 4k but that's only viable if you don't mind paying out for a new tower (but once you Have a tower you wont regret it - there's just so much more room to put things!

So really your PCI solution is a matter of taste. Each has pros and cons. In my mind the Mediator was the best solution for me and really it has been a Lot less hassle setting the GFX/Sound/TV/Ethernet up (even though I'm not yet finished doing this!) than some other things are with the Amiga. I'll give IDE as a rival example - A friend needed me to add a Hard Drive into my chain to copy some things over for burning to CD, but getting the computer to boot with one of my Hard Drives and his at the same time was neigh-on impossible! (take out my IDE HDs and the SCSI boot partition wouldn't show up for some reason!).

Results

Pros

+ Access to a wide range of inexpensive PCI cards.

+ Plus compatibility with Zorro cards.

Cons

- Poor fit in tower.

Top Notch!

TOTAL AMIGA

# Kicksoft

## Graphics

- Drawstudio**  
This excellent Graphics package available one again!! Comes on CD and includes Texture Studio & Image Studio.  
**£35.00**
- Photogenics 5**  
This excellent Graphics package by Paul Nolan. On CD.  
**£70.00**
- Image Engineer**  
Great Image manipulation program. Add effects to images such as Jigsaw, Wave and Frame! Comes on CD.  
**£25.00**
- Candy Factory Pro**  
Create 3D Text from any standard font and use them on web pages etc. Comes on CD.  
**£35.00**
- Art Effect 4** **LOWER PRICE**  
Billed as "Photoshop® on the Amiga". Excellent graphic package. Comes on CD.  
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# Reviews

# ImageFX 4.5

Review by  
Robert  
Williams

ImageFX is one of the few Amiga programs that is still with us from the glory days of the late 80's and early 90's, and all that time it has been in constant development. The 4.5 upgrade was supplied on CD and installed over my existing 4.1 installation with no fuss using the standard installer, even my third party shareware VisionFX PPC modules continued to work without problems. Opening the upgraded program reveals the familiar interface which was overhauled at version 3.0 but still retains many signs of its pre-graphics card heritage, particularly in the monolithic tool box. But as I've already reviewed ImageFX twice in Clubbed I won't dwell on the fundamentals of the program, let's dive into the new features.

## Drawing Modes

A variety of new drawing modes have been added, many mimicking the blend modes already available in the layer manager window. In ImageFX the drawing mode controls how the colour or brush you are painting with is mixed with the background image. Some of the new modes are Screen, Illuminate, Softlight and Hardlight, these all brighten the image in different ways, coloured by the selected colour or brush. The rest of the modes all combine

colours in one way or another, they are AbsoluteAdd, Subtract, AbsoluteSubtract, Multiply and Divide.

## Keyframe Animation

Part of the new animation system introduced with ImageFX version 4 was the ability to animate brushes across a sequence of frames. Version 4.5 has another new animation feature that adds even more power and flexibility to this concept, called the KeyFrame manager. This new window is accessed via an item in the layer manager pop-up menu when it is in animation mode. The keyframe manager lets you set key frames in your animation, and at each one you can set size and position at which the current brush will be rendered. When you choose to generate the animation ImageFX will calculate the intermediate frames to create a smooth transition between each keyframe. Using these tools you can make a brush fly across your animation in a fairly complex path while it changes size. In addition to this basic movement you can add motion blur or smoothing to the brush and also change its transparency so it can fade in and out. I'm pleased to see that in the keyframe manager allows you to position the brush at each key frame by dragging a wireframe outline in the main window, you can also adjust the corners of the outline to distort the brush during the animation. The wireframe preview is selectable and when it is switched on you can play back the animation and see a realtime preview of how your brush will move, very handy.

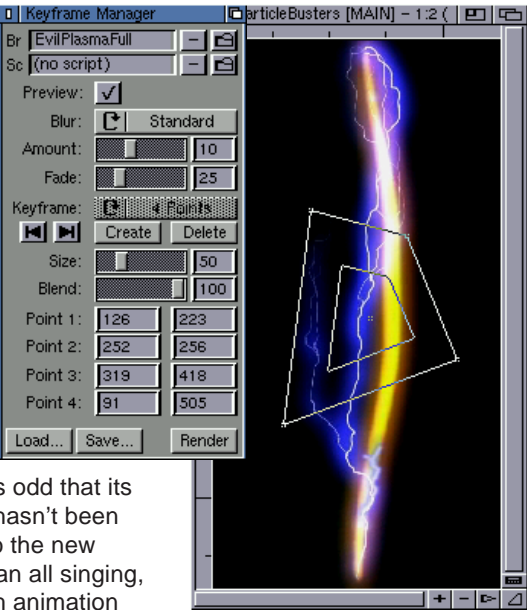
Another new feature of the keyframe system is its support for animated brushes, you can load IFF, GIF and INGF animation files and use them as a brush. As the keyframe manager animates them over an existing animation the frames are incremented, an

animation within an animation. As the keyframe manager is so much more intuitive than the old brush animation feature and supports anim brushes it seems odd that its rotation feature hasn't been incorporated into the new window making an all singing, all dancing brush animation system. While rotation can be achieved with the keyframe manager by manually setting the distortion controls it's very fiddly to do.

To help you get the most from this feature, Nova have included a large number of animated sequences on the CD-ROM which can be loaded as animations or brushes. There are about sixty sequences in total and most have a pyrotechnic theme with plasma, explosions fireworks and even a light sabre making an appearance. All the animations are in 24bit INGF format and the largest is about 160 frames at roughly 300 pixels square.

## Bug Fixes

Reading through the change log between version 4.1a (the last free upgrade) and 4.5 it's clear that many bug fixes have been made and indeed ImageFX generally seems more stable, although to be honest I never had any great problems with 4.1a. One very useful function mentioned in the log is the option to change the height of the layer manager window which is frustratingly small by default. This is achieved by setting the LAYERMANAGERHEIGHT tooltype in the ImageFX icon to a number of pixels. A resizable window would have been nicer but as the programmer mentions "Not pretty, but it works".



## Conclusion

Much as I like ImageFX (it is by far the most used graphics program on my Amiga) I can't find much to get excited about in this upgrade. While the new animation feature and drawing modes work well and the bug fixes are welcome they can't be called a major change or improvement. Nothing has been done to improve on ImageFX's problem areas, in particular the old fashioned interface and steep learning curve for beginners, and this upgrade has even less new documentation than the previous ones which were already poorly described. So I find myself thinking, as I did at the end of my ImageFX 4 review, that if you're buying ImageFX for the first time it's still a fine program with lots of features if you're prepared to learn them, however for upgraders the new features don't really justify the price.

## Results

For new users:

**Pretty Good!**



For upgraders:

**Could do Better!**



TOTAL AMIGA

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**Developer**  
Eyeteck

**Distributor**  
Eyeteck  
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+44 (0) 1642 713185

**Price**  
EZKey XS and keyboard  
bundle.....£49.95  
Infrared head and CDTV  
remote .....£19.95  
ATX-AT PSU adaptor  
.....£5.00

**Compatibility**  
AGA Amigas  
Tested on A1200 and  
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**Test Systems**  
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Eyeteck EZTower Z4  
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Apollo 1260

A4000D  
Micronik Tower  
Micronik Bus Board  
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**Supplied by**  
Eyeteck

*The EZKeyXS lets you use  
the extra keys found on  
many PC keyboards.*



# EZKey XS

## and Multimedia Keyboard

*Robert Williams finds that there's much more to  
Eyeteck's latest keyboard adaptor than meets  
the eye.*

With the growing popularity of tower solutions for the A1200 in the last few years, there are many keyboard adaptors available which allow an external Amiga or PC keyboard to be attached. While some models have had problems, particularly with multiple key presses, they have generally been basic products with a simple function. With the EZKeyXS Eyeteck have added a whole range of features and options to their "top of the range" keyboard adaptor.

### Installation

The EZKey XS is installed by plugging a PLCC socket over the keyboard controller chip found on the motherboard of A1200 and A4000 computers, this means installation can be quite involved, a desktop A1200 must be disassembled and in tower system you will almost certainly have to remove any PCI or Zorro bus board if you have one. On the A1200 the keyboard chip is just to the right of the white keyboard ribbon connector (looking from the front) and on A4000 it is to the right of the Zorro riser underneath the hard drive cradle. Before installing the interface on the chip, Eyeteck recommend connecting up the various control lines, what you connect

will depend on how many of the features you will be using. The full list of control lines that can be connected are, the power feed from an ATX PSU, ATX power switch, reset button, keyboard socket, xMON monitor switcher and CDTV infrared receiver. There is also a jumper that must be set to select power from the motherboard or an ATX PSU. Once the lines are connected the EZKey must be pushed very firmly down over the keyboard chip until it sits flush with the motherboard. Once installed like this it feels firmly connected. However, it is easy not to push down firmly enough, if this is the case the interface won't make a good connection and can even pop off the chip.

The 5pin DIN keyboard connector is attached to the EZKey by a cable about 20cm long and is designed to be bolted to the back plate of a tower. The EZKey XS supports both standard Amiga keyboards such as those supplied with the A2000, 3000 and IBM PC compatible keyboards with the AT style 5pin DIN plug. Amiga 4000 desktop and IBM PS/2 type keyboard which use a 6pin mini DIN can be used with an adaptor widely available from PC suppliers and I'm sure Eyeteck themselves.

### I've got the Power!

The ATX power supplies used in most modern PC cases have a soft power switch (older AT supplies with P8 and P9 plugs have a hard switch), this means the motherboard can signal the supply to turn on and

### The Basics

Before we start looking at the special features, let's see how the EZKeyXS performs as a simple keyboard adaptor. For a start multiple key presses are supported with both Amiga and PC keyboards so you won't have the problems with keyboard controlled games that plagued many earlier adaptors. When using a PC keyboard the key mapping seems logical, the Windows keys are used as Amiga keys and the menu key is mapped to Left Amiga M so it cycles screens. Pressing the Scroll Lock key cycles through a total of four key mappings, map 2 exchanges the \ and # keys making the layout closer to a real Amiga keyboard, the other two are designed with particular types of keyboard in mind, compact keyboards with only one Windows key and older style AT keyboards without any at all.

off, the switch on the front of the case is a signal that can be intercepted in software. In real terms this means that the computer can be turned off through software and the OS can respond appropriately when you press the power button on the case. While the EZKey doesn't allow software control of the power supply it does let you switch your Amiga on and off using a keyboard combination or using the front power button if you have an ATX power supply.

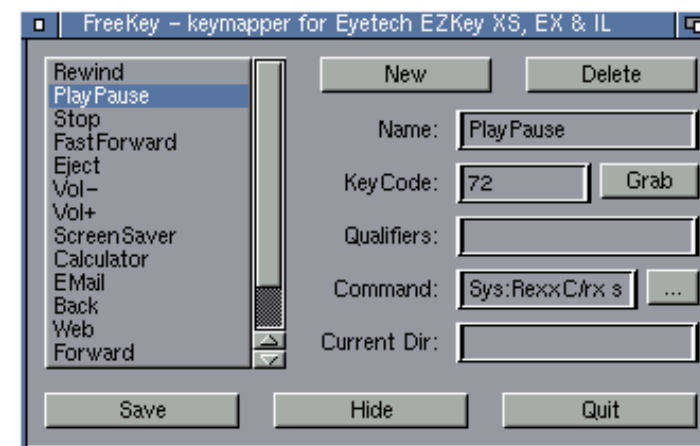
For this to work two connections have to be made to the interface. The first is a connector from the ATX power adaptor supplied by Eyeteck connects to the EZKey, this supplies power to the interface even when the power supply is "off" so the keyboard can be kept active to receive a power on key press and also connects the line which tells the PSU to turn itself on or off. The second connection is from the power switch on the front of the tower, pressing this causes the EZKey to generate a rest warning sequence before signalling the PSU to switch off. Because the ATX control has to be active when no software is loaded (otherwise you couldn't use it to switch on) the key combination of LAmiga, RAmiga and Delete to switch on or off the PSU is hard coded into the EZKey XS, this is slightly annoying when you have a keyboard with a special "Power Off" key but I can't see a way they could have avoided it.

### Keys, Keys and more Keys

The EZKey XS is supplied with a small freeware utility called FreeKey which was developed with the support of Eyeteck by Alistair Robinson who also wrote FreeWheel, supplied with many mouse adaptors. If you already have an EZKeyXS you can download FreeKey from Eyeteck's website however your adaptor must be the current MkII version. If it is not Eyeteck can perform the necessary firmware upgrade for £15.

FreeKey lets you make use of the "multimedia" keys found on many PC keyboards. These are commonly marked for functions such as launching a web browsers, EMail program and other applications or transport controls such as play, pause, fast forward etc. for music playback programs. FreeKey is a commodity which can be run from the WBStartup drawer or your s:user-startup script. Although it is not supplied with an installer FreeKey only needs to be copied to your hard drive.

When you first run FreeKey it opens its interface so you can configure the functions of the additional keys on your keyboard. You have to tell FreeKey about all the additional keys available on your particular keyboard, you do this by adding a new key to the list with the "New" button, then entering the name of the key (for example Web Browser or Play), then to find the key you click on a button called Grab and then press the key you want to assign, FreeKey then picks up the code that identifies that key. You can then add a qualifier such as Shift or Alt, allowing you to assign several actions to each key. Finally you can set the program or script that will be run when this key combination is pressed, currently FreeKey only supports running shell programs, however we found that all the programs we tried (including those usually run from Workbench) worked fine and that AREXX and shell scripts could be run using the rx and execute commands



*Assigning a command to a "multimedia" key is easy  
with the FreeKey utility.*



*This is  
the BTC  
9000Z keyboard  
supplied by Eyeteck.*

respectively. If FreeKey is run from Workbench (including the WbStartup drawer) it does not pick up the full shell path which could cause a problem to some programs and particularly scripts, fortunately a work around for this, mentioned in the documentation, is to run FreeKey from the user-startup script.

For testing Eyeteck supplied us with a BTC multimedia keyboard, this has a total of 16 additional keys arranged along the top of the keyboard. I spent some time playing with FreeKey, launching different programs and even wrote some AREXX scripts to control the freeware CD player ACDPlay from the transport keys on the BTC keyboard. Everything I tried worked well (once I had overcome the path problem mentioned above) and having the extra keys to hand did prove useful. The BTC keyboard is quite nice with a reasonable feel but I have to admit to still preferring the A2000 keyboard I use regularly. Eyeteck state that

the combination of the EZKey XS (and also the cheaper EX and IL models) and FreeKey should allow access to the extra keys on most "multimedia" keyboards, we tried two other PS/2 keyboards with extra keys and they worked fine, FreeKey is supplied with settings files for the Logitech iTouch and Genius Comfy keyboards so we assume these have also been tested.

### Monitor Switcher

The EZKeyXS provides control over Eyeteck's xMon range of video switchers from the keyboard. Pressing LAmiga, RAmiga (or the PC keyboard equivalents) and the Up cursor key switches between the two inputs. To set this up the xMon's two pin connector that would normally go to the flick switch is simply connected to the keyboard adaptor. Like the power up/down key press the monitor switch combination is hard coded into the adaptor.

### Remote Control

As an option Eyeteck can supply an infrared receiver which connects to the EZKeyXS and gives you keyboard and mouse control from a CDTV remote controller which they also supply. Two designs of receiver are available, a small external box which is connected to the to the EZKey XS via a mini-jack socket which can be mounted on the back of your Amiga or an internal unit which could be placed behind a blanking plate (with a suitable window) in a



tower case or anywhere else you fancy. For those not familiar with the CDTV remote it has a four way direction pad and two "fire" buttons at either end (similar to a games console controller) plus 21 smaller rubberised keys in the centre section. There is also a sliding switch which, on the CDTV switched the D pad between joystick and mouse mode. Eyetech have mapped the buttons on the controller so you can access most common keyboard functions and use the mouse remotely.

Because the CDTV controller doesn't have a full QWERTY keyboard Eyetech have employed quite a complex mapping to get full keyboard functionality. The Mouse/Joy switch is employed to switch between pointer mode where the D pad moves the mouse pointer and keypad mode where the D pad is used to select different character sets on the remaining keys. 13 of the 21 keys in the centre of controller are mapped to the letter keys on the keyboard, pressing left on the D Pad maps these to A-M and pressing right maps N-Z. up and down on the D pad is used to lock shift on or off respectively. With the D pad released the numeric keys on the controller allow you to enter numbers and their related symbols with shift lock on. The other keys are mapped to commonly used symbols, punctuation and functions depending on the alpha mapping and shift mode selected. The "fire" buttons are used as either left and right mouse buttons in pointer mode or return and backspace in keypad mode. Finally there are two special buttons on the remote which don't change regardless of mode, the CD/TV button toggles the xMon monitor switcher if one is fitted and the Power button resets the Amiga if it is pushed three times whin one second.

With this fairly complex mapping and no new markings on the CDTV controller using the keyboard remotely takes quite a bit of learning. I found I had to constantly refer to the

Full keyboard control is available via a CDTV infrared remote.



enter more than a few words would probably want to get a full cordless keyboard (any PS/2 model should be compatible with the EZKeyXS). On the other hand for more simple tasks with minimal text entry like presentations and demonstrations the remote would be very handy.

Excellent Design

The EZKey XS is obviously the product of many years of experience in keyboard adaptors at Eyetech, it has many neat features that will go unnoticed most of the time but will occasionally be invaluable. For example when used with a PC keyboard it has been designed to allow keys to be held down at startup, for example to disable an accelerator or bring up an early configuration menu, which is only usually supported by true Amiga keyboards. Another unusual feature is the implementation of the reset signal convention which gives running programs a moment of warning when you perform a keyboard reset, some use this to complete hard disk operations before the reset. Normally this reset convention

is only implemented on Amigas with external keyboards. Finally the EZKey supports hot plugging of the keyboard while it is running (although you cannot change keyboard types, PC to Amiga or vice versa without a reset) ideal if you use a keyboard switcher to share one keyboard among several computers. The EZKeyXS includes flash memory so the firmware can be upgraded by Eyetech without replacing any components, this is the function of the edge connector at one end of the board.

Conclusion

The EZKey XS is fairly pricey for what is a simple piece of hardware, however a great deal of thought has obviously been put into its design, it is hard to think how it could be more flexible or compatible. In all the time we used it we had no difficulties and the PC keyboard did everything a real Amiga keyboard would do. The facility to make use of "multimedia" keys and the optional remote are the icing on the cake, this really is the best keyboard adaptor money can buy!

Results

- Pros Well thought out design. Multimedia key support. Wide range of features.
- Cons A little expensive.

Top Notch!



EZTower Z4

At last! An Eyetech tower that's compatible with Zorro and PCI bus boards and ready for AI!

Eyetech have been in the A1200 tower business for several years now, but the EZTower differs markedly from their original tower design which has developed into the EZTower MkV and is still available. The Z4 is designed, as the name implies, to house an A1200 fitted with Apollo's Z4 bus board. This requires that the A1200 motherboard is mounted on the right hand side of the tower (looking from the front) with the accelerator towards. Other Eyetech towers have the A1200 motherboard on the left side with the accelerator slot pointing downwards. The advantage of this configuration is that you can fit a PC motherboard into the same tower which is not possible with this Z4 case.

First impressions of the tower are very good, it looks attractive and is slim compared

to many modern PC towers and the common A1200 Power Tower. The inside of the case is accessed via removable side panels which are each held in place by two screws at the back of the tower. Once the screws have been removed, they slide off quite easily with a pull at the hand hold thoughtfully pressed into the back edge. These removable panels are far nicer than the all in one top cover used on many other towers.

The case is what is commonly known as a midi tower with three 5.25" drive bays for CD drives and other similarly sized devices and four 3.5" bays. Of the 3.5" bays one is behind a floppy drive face plate moulded into the tower's front panel, the second can be accessed by removing a snap-out panel on the case's front and the other two are internal only for hard drives. The A1200 floppy drive is fitted behind the moulded face plate complete with its button intact, a captive eject button in the tower's front panel then pushes against the original button to eject the disk. Apart from placing the floppy drive rather far behind the face plate which makes inserting floppies slightly more awkward than normal this arrangement works very well and looks much better than the "home made" face plates supplied with many tower kits. Removing the snap-out panel to add a second accessible 3.5" device is rather

less successful in the looks department because the cover runs across the whole width of the tower, however we can think of little need for two 3.5" devices these days and many come with a 5.25" adaptor anyway.

Installation

Before installation in the tower the A1200 motherboard must be removed from the plastic casing, the top metal shielding is also discarded. Next three hex head screws need to be removed from the connectors at each end of the A1200 board, leaving five still in place. The motherboard can then be placed inside the tower. The connectors at the back of the motherboard are then lined up with the cutouts in the back of the tower (the joystick, floppy, serial and parallel connectors have a single long cutout) and the six hex screws loosely replaced. Two screws hold the A1200 motherboard to the tower's back plate, one these are in place the hex screws can be tightened. Now you can add any additional drives, connect everything up and refit the power supply. The tower is supplied with a long floppy drive cable and an adaptor to allow the connection of the power floppy drive and hard disk lights.

If you are not using a Z4 busboard, the Amiga is powered from a standard floppy driver power connector

connected to the motherboard floppy power supply and a single wire supplying -12V which goes out the back of the tower and back into the centre pin of the A1200 power connector. If you have a Z4 board the power supply is connected to the P8 and P9 connectors on the busboard, a much neater solution. As the Z4 board has AT style PSU connectors you will need an adaptor if you opt for an ATX power supply (Eyetechn can supply either type of PSU and a suitable adaptor), the advantage of an ATX supply is that it can be switched on and off from the keyboard using Eyetechn's EZKeyXS adaptor, also reviewed in this issue. If you buy a Z4 busboard Eyetechn supply a set of spacers so it is firmly mounted in the tower, as PCI busboards such as the Mediator 1200 and GRex 1200 both use the same mounting points as the Z4 board they should also be compatible.

The installation process is well documented in a nine page A5 booklet, although this is photocopied, it is clear, the instructions are detailed and photos are used where required. The step by step instructions take care to mention a what point expansions and add-ons such as a PCMCIA adaptor should be installed.

Cutouts

One very nice feature of this tower is the number of additional cut outs supplied on the back of the case for additional connectors. Of course there are seven standard slots for card (Zorro or PCI) back panels and one for the keyboard socket but here we also have four cut outs for 9/15pin D connectors (ideal for monitor switcher or additional serial port connections), two for 25pin Ds (parallel ports perhaps), one for a 50pin centronics SCSI



connector as found on the Squirrel and two round cut outs for audio output from a mixer (which Eyetechn can supply as an extra if you don't feel like building one). It has always annoyed me (I even mention it in my Ateo A4000 tower review) that when designing a custom back plate for Amiga towers no companies had the forethought to allow for additional connectors, so it's great to see them here. Each unused cutout is covered by a small metal plate held in place by screws so you can easily remove or replace them if you change your Amiga's configuration.

Conclusion

I really like this tower, it has most of the good features of the Power Tower, quality fit and finish, easy assembly and compatibility with bus boards and adds a more compact and stylish look (in my opinion of course), convenient side panels and all those handy connector cutouts. The only feature it lacks, that I can see, is a removable motherboard tray but that only really helps during initial assembly anyway. An excellent package and good value for money too!

By Robert Williams

Result

Top Notch!





## .info

## Developer

Georges Haljadvian  
 HTTP://gothic.fr.free.fr/amiga/  
 /index.html

## License

Freeware

## Compatibility

68030+ and FPU  
 AmigaOS 3.0+  
 Graphics card

## Test System

A3000  
 CyberStorm PPC/060  
 128Mb Fast RAM  
 CyberVision PPC  
 AmigaOS 3.9  
 CyberGraphX 4



Almost all Perfect Paint's features are accessed from this packed toolbar.

# Perfect Paint 2.8

*Has Robert Williams found the Mary Poppins of paint programs... is this practically perfect in every way?*

After mentioning a new version in the news pages of several issues of Clubbed, I thought it was about time we had a proper look at Perfect Paint. This application started as a simple freeware paint program and has been growing complex image processing and animation features, more with each update. So after downloading and installing the latest version, a simple matter of dragging the drawer on to my hard disk and copying a font, I got stuck in.

Perfect Paint opens on its own screen and initially two windows are displayed, on the left is the main tool bar and along the bottom of the screen is a bar containing thumbnails for each of the images that are currently loaded, up to a maximum of 10 images at once. The current image is displayed in a standard Amiga window, the image bar at the bottom of the screen can be used to swap between the loaded images but only one image window can be displayed at a time. In a tool bar at the top of the image window are various icons, three allow you to zoom in and out and to 100%. Other icons are used to tile the window neatly over a portion of the screen or to size it to the image. If you prefer a display similar to Deluxe Paint Perfect Paint can be set via a tool type to show the image in a window fixed at 100% and a separate Zoom window.

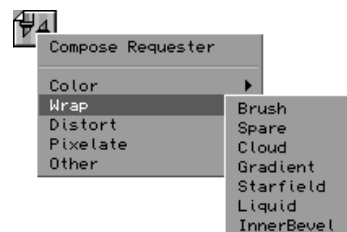
## Toolbar

Perfect Paint's user interface is rather unusual, none of its windows and gadgets except the image window follow the normal Amiga pattern, and it does not use standard menus at the top of the screen. The basic functions such as loading and saving are accessed by a pop-up menu which appears when you left click on an icon in the tool bar

window's title bar or by keyboard short cuts. Many other functions are accessed by right clicking on icons to pop-up menus. The main tool bar holds almost all of the program controls, it is split up into seven sections, as these are so important I will mention them in detail now.

**Brushes** - Much like traditional Amiga paint programs you can choose several sizes of square, round or oblique brush, you can also pick one of 9 brushes cut from an image or predefined round soft edge brushes of various sizes.

**Tools** - All the standard painting tools are provided such as circle, box, line, curve and polygon. For most tools clicking and holding down the left button on their icon allows you to choose from various options, such as a filled version, once you have chosen an option it becomes the new default for that button. Some buttons have a "folded over" corner, this indicates that right clicking on the icon will open an additional settings requester, for example the line tool has a settings requester where you can define a dash pattern. In addition to the standard tools there are several that stand out as offering some interesting options. The fill tool has a useful tolerance option which controls how close a colour has to be to the area you click for the fill to flood over it. The text tool lets you make a text brush out of any system font including bitmap and scalable



Many tool bar buttons have popup menus like these from the Effects button.

types, three levels of antialiasing are available which make the text look very smooth. There are also options to produce an outline of the text and to apply various really nice effects such as drop shadow, glow and bevel.

**Controls** - These buttons give access to some of Perfect Paint's more advanced features, when clicked with the left button they toggle on and off indicating whether a feature is in use. Clicking with the right button produces a menu of options to control the feature. The buttons in this section are for: Brush, enabling you to cut brushes from the image, the menu has load and save options and allows effects such as rotation to be applied to the current brush. Anim, switches between animation and single image mode. Spare, allows you to switch to a spare "scratch pad" area for the current image. Effects, various image processing effects which can be applied with the painting tools. Stencil, allows areas of the image to be masked so painting and effects do not apply to them. I'll discuss some of these features in more detail later in this review.

**Misc** - brush modes, with this button you can select various painting modes such as rubber stamp (called clone in many other programs), smear and water colour. All these modes have a fade option which is accessed by right clicking on the icon, this causes the colour to fade as you paint as it would do with a real paint brush. There are two other modes to this function which are unusual in an Amiga package, Burn/Dodge and Saturate/Desaturate. These options are designed for correcting photographs and allow you to lighten and darken or saturate and desaturate areas of the photo by painting over it

with the left or right mouse buttons, this is much quicker than changing effects all the time. The next button in this section of the control bar is for special effects, these include warping an area of the image, applying one of several pre-defined effects which are combinations of Perfect Paint's effects, a simple ray tracer which allows you to insert many pre-defined 3D objects and rotation correction which can automatically rotate an image based on a line which should be straight. Finally here we have the antialiasing control, this is used to smooth the edges of hard lines like those drawn with the standard painting tools to avoid jaggies. This feature alone instantly puts the quality of Perfect Paint's output streets ahead of traditional paint programs such as Deluxe Paint and Personal Paint.

**Palette** - The next area of the control bar is the colour palette, this shows 256 colours which can be picked by clicking on them. There is also an icon which produces a spread of colours when clicked so you can quickly choose any colour. Like many packages Perfect Paint has a draw colour and a background colour, these are shown in an icon, right clicking here produces a menu of palette options. These include a window where you can define individual colours by their RGB values and also create spreads and colour ranges for gradient fills. Up to ten gradients can be defined, each one can use up to 20 different colours, an opacity can be set for each colour so you can make partially transparent gradients. The palette menu also includes various colour effects such as colour and gamma correction.

**Control** - The buttons in this section will be instantly familiar to anyone who has used DPaint. We have buttons for symmetry (who hasn't made a few snow flake patterns in DPaint?) and grid, both adjustable with a right click. Below them are clear image which clears the current image to the background colour and Undo which Redoes if you right click. The only unusual icon here is for AREXX, right clicking allows you to select an AREXX script which can then be run at the click of the button. A number of sample scripts are supplied.



The standard image window with zoom and tiling controls at the top.

This image shows the liquid effect applied with a stencil and an overlaid text effect.

Also in the right click menu is a user definable section so you can add your own scripts to the menu for quick access, submenus are supported.

**Progress** - Right at the bottom of the control bar are two progress gauges, the top one shows the progress of longer effects and the lower one can be used by an AREXX script to show overall progress if it runs several effects.

## Effects

A selection of image processing effects are available and these are applied using the standard painting tools when the effects icon is toggled on. The effect to be applied can be picked from the effect button's pop-up menu or from a useful list window that stays open on the screen without blocking other operations. The available effects and split into six categories: Colour, Wrap, Distort, Pixelate, Other and Blur and most have a preferences requester where you can adjust their options. The range of effects is good with all the standards like blurs, colour correction and ripples well catered for. Some of the more unusual ones include an excellent liquid effect that produces beautiful interference patterns and two useful image generators: clouds and starfield which make good backdrops. Most effects have a preferences requester with parameters to tweak the end result to your liking. Many of these requesters

also have a preview thumbnail that shows the effect on a small portion of the image, the previews can be repositioned by dragging the mouse but not zoomed. Unlike Photogenics the effects are not painted in real time, when you draw you see a rubber band line or solid colour and the effect is processed and drawn when you complete the drawing operation. All except the colour effects have adjustable transparency, so you can have some of the original images showing through, this can either be set before hand or you can opt for a requester to pop-up after you finish painting but before the effect is applied.

## Brushes and Compositing

A brush is a portion cut from the current image, once the cut brush icon is selected clicking on a filled shape tool allows you to cut circles, freehand shapes etc. as well as the usual rectangles. More complex shapes can be cut as a brush using the stencil functions described below. There are ten brush buffers so you can hold several brushes in memory at once and a thumbnail of each is displayed in the Select Brush window. Unfortunately the Select Brush window is modal, so it can't open all the time. Brushes can be loaded and saved as and when required and there is also the option to save an 'Album' of up to ten brushes and load the whole lot in one go. The brush pop-up menu offers rotation and

scaling options and a variable amount of smoothing can be applied to the edges when a brush is composed onto the background. One annoying aspect is that operations applied to a brush can't be undone.

Cutting brushes from another image and painting them on to a background is the main method of composing images in Perfect Paint as it doesn't have the layers and rub-through options found in many other image processing programs. While the brush tools are very powerful, I did find the lack of layers limiting, it's hard to go without the flexibility they give for experimenting and making minor adjustments after you are used to a package with layers.

## Stencil

Stencils, or masks as they are commonly called in other packages, are an important feature of any image editing program, their function is to protect areas of the image from alteration, either by painting or image processing effects. This is useful, for example to change the colour of a particular part of the image or to apply an effect to a particular object. In Perfect Paint the stencil features are all accessed from the Stencil button and its associated Menu. Clicking on the button activates the current stencil and you can click again to temporarily deactivate it at any time. To define the areas protected by the stencil you use the Edit Stencil window which is accessed from the pop-up menu. In edit stencil mode the areas of the image protected by the stencil are shown as a checker board pattern, which makes the active area of the image very clear. The edit stencil window has various tools that can be used to select the stencil area by clicking on



Whew, no sign of Lawrence Lewellen-Bowen!



the image. First is the magic wand which flood selects areas of similar colour, the flood tolerance for each colour channel (R, G and B) can be adjusted. The eye dropper tool selects all areas of a similar colour, again using the tolerances. The other tools are standard drawing tools to select freehand, polygon, square and circular areas. Any combination of these tools can be used to selected stencilled areas so, for example you could select using the magic wand and then clean up any stray pixels by drawing a free hand shape over them. You can also use to the tools to remove areas from the mask by toggling an Add/Subtract cycle gadget. One excellent feature is that if you use the magic wand or eye dropper to select areas changing the tolerance updates the selection instantly, making it very quick to get just the area you want.

Once you have defined the stencil you want there is an option to smooth the edges eliminating jaggies on the join between edited and projected areas. Another neat option is to draw a shadow (with definable offset and transparency) below the stencil protected area. With the stencil switched on cutting out a brush will pick-up just the unprotected area, this is a good way to remove objects from their background for compositing. The current stencil can be saved and new ones loaded, a feature which could be used to work on several areas on an image separately by loading different stencils.

Animation

In addition to painting and image processing Perfect Paint has another trick up it's sleeve, powerful animation support. An animation can be quickly created by adding frames to the current image. An animation control window with VCR style buttons and a frame slider is available so you can easily browse through the animation. All the frames except the one currently displayed are stored on disk minimising the memory requirement, for fast playback a small thumbnail display of the whole animation is kept in memory or you can opt to playback from disk which is slower.

Three methods of animation creation are supported: Cell animation is the most basic, for this you draw on each frame individually, ideal for making animated GIFs for websites which tend to change each frame. I couldn't find any support for a light table or onion skin tool which allows you to see previous frames below the current one, this feature would have made Perfect Paint more suited to traditional hand drawn animation. Next up is animation using brushes, although there is no support of brushes with multiple frames (anim brushes, ala DPaint and Brilliance) Perfect Paint does have a move requester that allows a static brush to be automatically moved along preset paths across an animation. A brush can move in to or out of the animation from the top, bottom, left or right and the program generates the intermediate frames. During the animation the brush can be sheared and rotated and the transparency can change. The final type of animation uses some of the image processing operators to create transitions between animation frames, there are a selection of preset effects including fades, pixelisation and a really nice ripple.

Finished animations can be saved as a GIF or IFF ANIM file and there is automatic colour reduction with three dithering options. While the program does offer the option to set the frame rate for each frame I found this only worked for IFF animations, I needed to use an external utility like WhirlGIF to set up my GIF anims. None the less Perfect Paint is an excellent tool for creating web animations, with its high quality antialaising working particularly well at low resolutions. If you wish to save your animation in full 24bit quality Personal Paint offers its own file format which uses the XPK compression package to minimise file size.

Special Effects

Perfect Paint has several features designed to help those of us who are less artistically inclined to achieve good results. As I mentioned briefly earlier the built in text effects are really stunning. There are 18 in total, many of them have translucent elements and use the current drawing colour, some have



The animation system, showing the control and preview windows.

additional options too which gives an element of customisation. There is a range of predefined effects called Alchemy which automatically apply several of Perfect Paint's image processing operators to achieve a certain look. Some emulate painting styles like oil paint or pointilism. There are several different mosaic options and more unusual ones like plastic wrap that makes your image look like it's covered in cling film! The alchemy window has a useful preview but it only uses a predefined image rather than a portion of the current buffer. Probably the most impressive of these aids is the built in ray tracer this comes with a selection of simple objects such as arrows, cones and cubes plus several designed to be used as buttons in web pages and presentations, it is also possible to create 3D text objects. The objects can be coloured or textured with a bitmap, a number of which are supplied. The position of the object and lights can be changed to get just the effect you want, a preview gives you an idea of the result before you commit to the final render. Once you're happy the finished render can then fill the image or be used as a brush.

AmigaGuide file which is largely a reference guide to the functions available and while everything is listed the functions of many commands aren't described in detail. Most of the time it's easier just to play around with a function to fathom out how it works. It would be nice to have some tutorials to help new users get used to Perfect Paint's way of working which is something we will consider for future issues of Total Amiga. One nice aspect of the documentation is that unlike most AmigaGuides it links to some useful images, for example one shows all the pop-up menus that are available and which buttons they are linked to.

Conclusion

While Perfect Paint's interface is quirky and nonstandard its feature set puts many commercial packages to shame. It's hard to believe that a program of such depth and complexity is freeware and developed by one person. It is well worth spending the time necessary to understand the interface, and if you're anything like me you'll enjoy the fact that the more you use Perfect Paint the more cool features you find!

Documentation

Perfect Paint's documentation comes in the form of an

Results

Pros

+ Powerful features  
+ Wide range of effects  
+ Reliable and bug free  
+ Supports modern hardware  
+ Freeware!

Cons

- Quirky interface.

Pretty Good!

😊

😐

😞

😡

Olympus Camedia C3000Z

Alf Whitfield is on a mission to find the ideal digital camera for business and pleasure.



My first digital camera was an Olympus Camedia C-830L which was good at 1.3 million Pixels. Then in March 2001, I purchased a Camedia C-3000 Zoom which is 3.3 mega pixel from Dixons. My main reason for this purchase was that I was not getting the results I needed, in particular more life like colour. I mainly use my Digital cameras for my work at a bakery, this involves taking close-up photos of our products for quality control purposes so an accurate result is essential. For these tasks I have found the C3000 a great improvement over the C830 and it also takes very good photos out doors, in fact it's a good all round camera.

The front of the camera has a brushed metal finish and is gun metal grey in colour, the back is black plastic with a crinkle finish. On the back is the colour LCD viewfinder which is also used to view the photos and to access options via a set of menus. There is also a standard optical viewfinder with diopter adjustment for glasses wearers. Using the optical viewfinder helps to prolong battery life because the LCD uses plenty of power. The camera can run on four standard AA cells, Olympus

also offer a pair of Lithium cells which last much longer but cost about £10 each and are hard to get hold of. If you don't use the Lithiums rechargeable AA cells are recommended as Alkalines don't last long at all. It's also worth considering the AC adaptor if you do indoor work.

On one side of the camera is a flap covering the SmartMedia memory card slot, an 8Mb card is supplied which on the lowest resolution will hold over 100 pictures, switching up to the highest reduces this to just 2, so you may want to invest in a bigger card. Larger cards are widely available and rapidly reducing in price (currently a 64Mb SmartMedia card is about £40). On the opposite side of the camera are various connectors for the AC adaptor, USB and serial ports. The camera is supplied with a USB lead but the AC adaptor and serial cable are extras. Fortunately I already had both as they were supplied with my C-830 camera so I didn't need to buy anything else. For data transfer to the Amiga you will need to buy the serial cable, maybe in the future the USB port will be supported. If you are thinking of buying an Olympus camera now be careful to check that it has a serial port as I believe the C3000 is one of the last to have both types of connection.

The C3000Z's 3.3 mega pixel sensor gives it a maximum resolution of 2048 by 1536 pixels, below this the camera offers over 10 lower quality settings which reduce the resolution and increase the compression to fit more images



on a memory card. The lower resolutions available are 640x480, 1024x768, 1280x960, and 1600x1200, most of these are offered in two levels of JPEG compression. All the resolutions are also available in un-compressed TIFF format but this takes up much more memory, at the maximum resolution a 16Mb card is needed for one image! I normally use 1024 x 768 for average enlargements as I find this is adequate and quicker to download and process. If I need a bigger print I increase the resolution to avoid a blotchy pixelated result.

The built-in zoom lens gives up to 3x optical magnification which is equivalent to a 35-105mm zoom on a 35mm camera. One of the reasons I chose this camera is that it also offers the option to fit additional fixed lenses, compatible wide angle and telephoto are easily available from good camera shops. You don't need to buy specific Olympus lenses, compatible alternatives are available. The set I bought came with an adaptor which screws into existing lens at the front of the camera. A flash is built into the camera body that has three modes, auto, red-eye reduction and fill-in. An external flash is available but it uses a special connector so you have to buy a specific model from Olympus this is rather expensive at £300, about half the price of the camera!

There are plenty of options for more serious photographers. In addition to a full automatic program the camera can work in Aperture priority, Shutter priority and manual modes. There are five white balance options: auto, bright sunlight, cloudy, tungsten light and

fluorescent light. You can choose between "film speeds" equivalent to 100, 200 or 400 ASA and there is also an auto option. When you just want to take a quick picture setting all the options to auto turns the C3000 into a great point and shoot camera but all the options are there when you need them. If I have one criticism of the camera it is that it doesn't retain the settings that you make, it always returns to the defaults when turned on.

Other features include recording sound clips to go with each photo and you can also record short movie sequences although these do take up a lot of space on the memory card, I don't know whether either of these files can be downloaded to the Amiga. To download photos the camera connects to the Amiga via the serial port, this model seems to be compatible with all the Olympus supporting digital camera software on the Amiga I tried including CamControl, Digicam and AmiCamedia.

Overall I have been very pleased with the C3000, it handles very well, is robust, has loads of features and above all it takes great photographs!

Result

Top Notch!



.info

Developer  
Olympus  
www.olympus.co.uk

Distributor  
Most camera and electronics dealers.

Price  
£600 approxXX

Compatibility  
Any Amiga (Olympus or compatible serial cable required).



## .info

## Developer

Hyperion Entertainment  
www.hyperion-entertainment.com

## Availability

Most Amiga games dealers.

## Price

Approx £40

## Compatibility

68k version:  
060, Permedia 2 or Voodoo  
3 graphics card, 32Mb RAM  
(64Mb without VMM).

## PPC version:

Any PPC card, graphics  
card, 64Mb RAM.

## Test Systems

A1200  
BlizzardPPC  
060 50/603e 240Mhz  
128Mb RAM  
BVisionPPC

A3000  
CyberStormPPC  
060 50/604e 233Mhz  
128Mb RAM  
CVisionPPC

Descent:  
FREESPACE

Mick Sutton gets spaced out on Hyperion's latest release.

Well those Hyperion chaps have done it again haven't they, yet another top class game hits the Amiga. We have all admired the two previous releases from Hyperion, but truth be told the games are in some ways similar or maybe more to be accurate the same genre. Most people who know me will know that I am into flight sims in a big way, when Hyperion stated that they were going to release Freespace I thought to myself "oh well not a flight sim but at least something different". Freespace is a space combat simulator in the mould of Wing Commander which was released on both the PC and Amiga many years ago, but of course Freespace far exceeds it in regards of graphics, sound and game play by a long way.

## Prepare for Launch

Freespace comes packaged in a DVD case (wish all games were packaged like this) with a professionally printed cover that depicts some of the in game graphics. Inside the case is the CD and a registration card, all the documentation is on disc.

Like all the previous Hyperion releases, the Freespace installer uses the graphical features of the OS 3.9 installer utility which in this case is a nice backdrop of a spaceship. The installation was simple, I

chose the intermediate level and after choosing where to install it to the only other options were what language to use (English, French and German are supported) and whether to copy the movie files onto the hard drive. With the movie files the installation uses 675 Mb compared to 427 Mb without, but having the movie files installed should speed up loading. To run the game you will need WarpUp if you have a PPC card and Warp 3D if you have a 3D accelerated graphics card and want to play it in it's full glory.

## Warp Speed?

The really good news is that Freespace has much lower hardware requirements than either Heretic II or Shogo, this means that it will run on a wider range of machines and is beautifully smooth on high end PPC systems. The minimum requirements are an 060 processor and a graphics card, but if you don't have a PPC board, a 3D graphics card is recommended to get a decent performance from the game. A minimum of 48 Mb free RAM is required to run Freespace on a PPC machine which means it's happy on a 64 Mb system. On a 68k machine you can get away with as little as 24 Mb free RAM if you use the VMM virtual memory utility.

## Count Down

When you run the game a GUI appears that has buttons to launch the game or to set options required before the game loads. Before you run Freespace for the first time it is advisable to go into the setup window and check the options to suit your hardware configuration. In the setup window there are tabs with the options for video, Warp 3D,



audio, joystick, speed, network and memory. Most of these options can be left at defaults but there are a few you will probably want to alter. On the video tab you can choose software rendering or hardware rendering for those lucky enough to own a 3D card. If you have a sound card you can select to use AHI on the audio tab. For those of you who don't like using the mouse and keyboard controls there is an option to use CD32 controller, Playstation controller via a PSX port or a PC analogue joystick. If you choose the PC joystick you will need a suitable adapter (instructions to build one are included in the docs), a calibration utility is included although we had problems getting the readings to save and we were forced into manually editing the config file. Once you have set all your options it is time to click on the play Freespace button!

## Mission Control

After an intro movie and a couple of nice loading screens a create pilot screen appears where you can create a new pilot or load an existing one, which allows you to continue a saved game. When you commit your choice of pilot the main menu screen appears, and oh boy this is starting to look a bit special. The menu is a rendered image of your ship's hanger complete with animated sequences and sound effects. You can choose what you want to do by clicking on various items within the hanger which animate as you move your pointer over them... neat! For example moving your pointer over the computer screen to the right of the image makes the screen glow and the

commander standing nearby looks at you, clicking on it takes you to the in game options screen.

It is from here that you can go to set various in game options such as graphics detail, level of difficulty and multi-player options. Also from this screen you can access your controls set up and oh boy there are plenty of controls that can be set from basic stuff like what button puts the brakes on or fires a weapon to the very complex number of commands that you can communicate to your wingmen via a touch of the keyboard, you can even configure your HUD (head up display) the way you like it to look, I have to say this game is big. The screen looks futuristic and like the hanger screen has a very atmospheric space theme style music playing in the background, I must say it gets you into the mood of the game right away. So lets hit the commit key and get on with it!

## Lift Off

You can either plunge yourself into a campaign or opt for training missions, and if you want to survive more than five minutes I suggest the latter of the two. The training missions give you hands on experience at flying and dogfighting, they also provide a good way to learn all the keyboard functions and controls (there are many). Your mission briefing is very thorough and relayed to you via both text and spoken from your commander, take it from me listen to all he has to tell you as in this game orders are to be followed to the letter or face the consequences. Forget intro screens, forget menus for settings, forget orders (oops better not!) this is where the action starts. On selection of your mission you are plunged into deep space with your wingmen (buddies) or trainer close by, these guys are in constant communication with you and are there to help you get through your tough missions, more on this later.

## Space The Final Frontier

The in game graphics of



In-game shot showing the HUD which gives you loads of information, you can hide items so they pop up when required.

Freespace are what I would call pretty accurate looking, although not having been in space myself it looks pretty convincingly real to me. The vast vacuum of space isn't just black with a few stars thrown in for good measure, you can see distant galaxies, a shimmering haze of blue in the background and when you ship moves asteroids and debris (space junk) passes you by, never knew space looked so busy. The ships themselves are usually made up from subtle shades of grey as most spacecraft in the real world seem to be, but are very detailed. You can see lots of detail on the surface of the ships including identification letters or numbers, booster rockets light up brightly when cranked up to full power and look too hot to touch! Your view from the spaceship is via a

HUD that is totally configurable to your own liking, this gives you all the information you will need during battle against the Vasudan forces such as target locking, enemy ship information, where the enemy are in respect to your position (very useful I can tell you), how much damage you have sustained and all manor of navigation and weaponry information.

So lets take a further look and get into battle, you can target a ship with a simple keystroke (T for any target or H for any hostile target) and once this is done you have indicators letting you know where and how far it is from you. Once targeted you can even match your targets speed (by pressing M) so he finds it hard to shake you off, then you can try out various primary and



One of the rendered mother ship hangers used as main menus to access features such as settings, pilots, missions etc.

secondary weapons to destroy it and from the ones I have seen they look pretty cool. Now for some real eye candy, when your targets are on the verge of total destruction blue flashes of lightning emit all over the vessels body just prior to a massive colourful explosion. During the explosion you see the structure of the craft breaking up and scattering debris outward with some pieces ablaze... ultra cool!

## Watch Your Six

The realism doesn't end there, the sound aspect of the game is spot on. For example when an enemy or dare I say it a friendly ship explodes it is silent. In space there is no air to make sound waves (space is a vacuum) and therefore explosions make no noise as they would on earth, but you can hear your engines running and weapons being launched. When your ship takes a hit it shudders which makes me think a Playstation game pad with vibration would be excellent with this game. Another aspect that really engrosses you in the game is constant radio communications that you receive in the heat of battle, such as requests for assistance or a wingman warning you that you have an unsighted enemy attacking you. When you receive a radio communication from your wingmen a video window appears in your HUD so you can see him talking to you and react to their situation, this makes you feel even worse when you not only hear him scream in agony but see it too when his ship is destroyed (gulp!). As you can see in this game you are not a sole individual fighting the enemy single handed like in Heretic II or Shogo, no sir, you are part of a team and you depend on each other to get through the missions alive.

## Star Wars

Freespace has bundles of game-play, you feel part of the team from the very beginning and have full motivation to do well, there is a system of medals to be won for



One of the huge capital ships it will be your mission to defend during your career as a pilot.





courageous pilots. The battles are very fraught and realistic, with action taking place all the time, one minute you are guarding a friendly vessel and the next embroiled in a massive spaceship dog-fight, not of course forgetting to keep an eye on the ship you have been ordered to protect! Your performance in battle is important because it influences future events within the game, if you don't manage to destroy those fighters they will be back with reinforcements! Throughout the battle sequences atmosphere setting music (can be switched off) is playing in the background that changes tone according to

what is going on in the game. There is a thorough pre-mission briefing with specific orders to be followed and a detailed post mission debriefing that details how well or not you did. There is even a suggestions button to click on to give you advice on how you may have performed better if you followed orders to the letter... oops!

So far I haven't mentioned how fast Freespace runs on my system (PPC 240 Mhz/060 50 Mhz & Bvision graphics card), I have to report that it runs very fast indeed with hardware rendering (CVision, BVision or Voodoo 3) at maximum detail.

Even using the 68K executable in hardware rendering mode gives reasonable frame rates as long as you set detail level to medium. What if you don't have a 3D graphics card I hear you say? I have tried it with the PPC in software render mode and it runs fine, a little slower and a bit harsher looking but still quite impressive. I even gave it a go with the 68K executable using software rendering at low detail and it ran but I felt it was too slow to be playable. I should imagine the maximum performance on currently available hardware would be from a high speed PPC (603 or 604) with a Voodoo 3 graphics card, but it will run adequately on lesser

systems to varying degrees.

**Mission Accomplished**

In conclusion Freespace is one of those games that you will want to play to the bitter end and then be wanting extra mission updates (I know I will), it is just so damn good. It has superbly realistic graphics that make you feel you are in space, the excellent sound and music add to the atmosphere and excitement of the game. If this wasn't enough Freespace has the best game-play that I have experienced since playing the first port of Quake to the Amiga. In case you haven't guessed by now this is a must have game!

Results

Pros

- + Runs on a range of systems.
- + Involving and varied game play.
- + Stunning graphics and sound.

Cons

- No manual.

Top Notch!

😊

😊

😊

😊

😊

😊

Pay by credit card and get a **free CD-ROM.**  
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# Amidog's Movie Player

## AMP2

*Could this oddly named utility be the first to bring DVD playback to the Amiga? Robert Williams finds out.*

**M**PEG video and audio files have for some time now been one of the most common ways of providing video and audio on the Internet, and fitting it on CDs and lately DVDs. AMP2 (Amidog's Movie Player, not to be confused with AmigaAMP the MPEG audio player) is the latest version of Mathias 'amidog' Roslund's player for these files. AMP requires an Amiga with a PowerPC accelerator and uses Haage and Partner's WarpUp system.

AMP can be run either from the shell or using a separate MUI utility, either way all the options are available. Using the GUI you can save your preferred settings and given the range

available this makes it far the easier to handle than a complex command line. On the other hand the shell mode means AMP can be called from your own scripts or file manager buttons.

### Sights

AMP is designed to work well on both AGA and graphic cards. Under AGA greyscale, colour and HAM screens are supported and you can also opt for a window on the Workbench screen. If you have graphics card running Picasso 96 or CyberGraphX AMP can open in a window or it's own screen in greyscale or colour using 8bit, 16bit and 24bit colour depth. If your graphics card supports it (the Picasso IV and C/BVisionPPC are three that do) you can select the overlay option, this renders the movie into a special graphics card buffer which is resized by the graphics card hardware, this means you can expand the window without the playback slowing down, a smoothing effect is also applied reducing pixelisation. Switching to greyscale mode speeds up playback and AMP has a lores option to halve the horizontal and vertical resolution, this can help achieve an acceptable frame rate with high resolution movies.

### Sounds

Sound can be played either via the Amiga's built-in hardware or a sound card using AHI. Options are available to halve or quarter the sample rate and to switch to mono, both of which significantly reduce the

processor power needed to decode movies with audio.

### Play it Again...

Using the GUI an MPEG file can be selected using a file requester, clicking on Play File opens the display you have selected. If you choose window mode a standard Amiga window opens with a scroll bar along the bottom that is used to show the current position in the file, you can drag the scroll bar to skip forward or back. Although the scroll bar isn't available in full screen mode, whatever display you choose you can use the number keys to skip through in ten percent chunks, this works fine on shorter movies but is a bit annoying on longer ones where each chunk can be several minutes long. The other options available are pause, resume and exit which are mapped to space bar, return and escape respectively. Hopefully one day some more controls will be added and perhaps a control GUI for window mode however the current controls work give you the basics. I have tried AMP2 with MPEG files from a variety of sources on the Internet and various CDs, as yet I have not found one it won't play. This is probably mostly down to the MPEG standard which doesn't have different codecs as found in AVI and Quicktime files but never the less AMP2 seems pretty compatible.

### DVD

One unique feature of AMP2 is that it can play DVD movies, and it really works! Of course

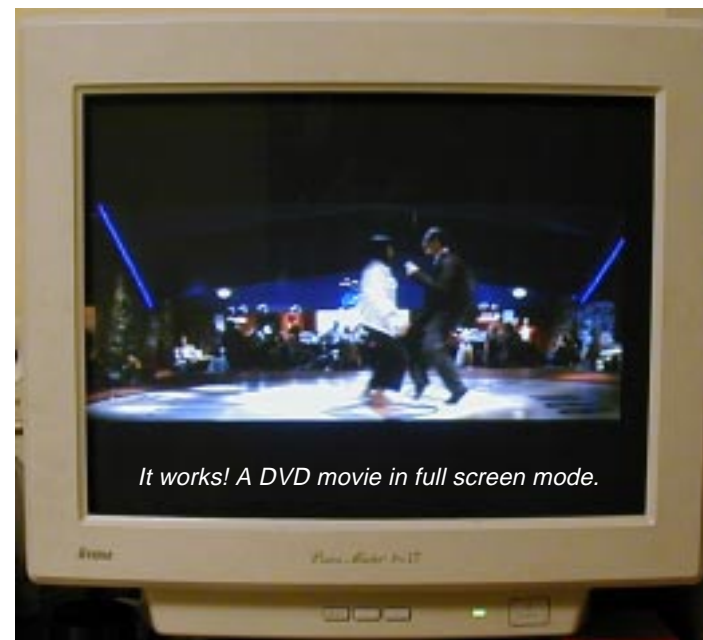
you need a DVD drive attached to your Amiga to do this, for this review I was able to borrow a Pioneer SCSI DVD-ROM drive. Any drive should work including one of the many IDE DVD units available but a SCSI drive on a DMA controller should give better performance due to lower CPU usage. After setting your options and specifying the device name and unit number of your DVD drive AMP starts and presents you with a list of the titles available on the DVD. The menus offered by most DVD titles are not supported but on most discs the choice of titles

## DVD Drives

When I first tried to use the Pioneer DVD drive I attached it to the A3000 SCSI bus along with my other external devices. However I could not get AMP to read any DVD's and when I mounted it as a CD reader it was erratic at reading ordinary data CDs. On checking with Mounter I found that it often failed to even show up on the SCSI bus. All this pointed to a SCSI problem but the drive was attached to the same bus as my CD-ROM, writer and an additional hard disk all of which continued to work normally. I had almost given up hope when I decided to try the DVD on the CyberStorm SCSI controller, which meant running with the A3000 cover off as I don't have an external connection. On this controller the drive performed flawlessly so the only conclusion I can draw is that the A3000's built-in SCSI has an incompatibility with the Pioneer drive.



When playing DVDs you can select the audio track and subtitles.



allows you to view all the video material. You are then offered choice of the available audio and subtitle options, this means you can choose alternative language and commentary tracks. With that choice made play begins, once the movie is going you are limited to the standard play controls, there are no additional options for DVD use.

DVD playback is a very processor intensive process, for a start DVD video is of high quality and relatively high resolution and then there is the better than CD quality sound, both of which need to be

decompressed on the fly. I found that on my CyberStorm PPC, the fastest currently available PPC card (but not over clocked), I needed to use the lores option and reduce the audio sample rate to 24kHz to play back movies without the sound skipping, with these settings the video was slightly jerky, running at around 15 frames per second, but is very watchable. Even then I got the odd skip in the sound when there was lots of action on the screen. One piece of very good news is that all the DVD titles I tried worked, this included a variety of movies from different

publishers and some TV titles. All my discs are region 2, as are the authors so I can't confirm that other regions would work.

On the DVD front I think it is pretty amazing that AMP manages to play DVDs at all, that it works reliably on a range of discs and is watchable on such relatively old hardware is fantastic and a great sign that we'll have good DVD support when faster hardware comes along... way to go Mathias!

According to the documentation Video CDs (an earlier standard which put an MPEG 1 encoded movie on a normal CD) in both standard and CDi formats are supported in the same way as DVDs, using the same requesters to pick tracks etc. I was unable to test this as I don't have any Video CD discs.

During the time I've been testing AMP2 I have had a few

### Pros

- + File, VCD and DVD playback.
- + Plenty of options.
- + Full GUI.

### Cons

- Limited controls.
- Current hardware not really up to DVDs.

Results

Pretty Good!

## Top Tips

Following our Introductory feature on IRC last issue, Elliott Bird has a couple of top tips for those who chose to use AmIRC.

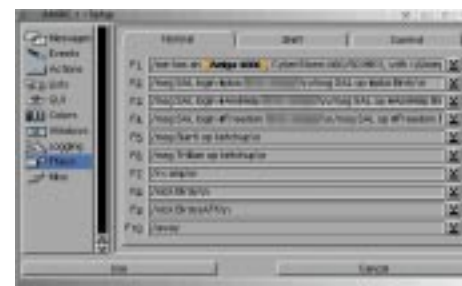
### Setting up sounds in AmIRC

With IRC, you can have the ability to play sounds or music during your IRC sessions! Others in the same IRC channel will see your sound request, and if they have the sound, they will hear it too! Setting this up is a relatively simple procedure. You can find the Sound settings in the "Misc" section of the AmIRC setup (which can be found in the main

menu: Settings -> Setup). In the "CTCP Sound Handling" section, you need to select where your Sounds directory is located. (If not, create one first!) There's a volume slider below which you can adjust to suit your needs. Then there's the Sound player section, the "use external player" check box should be ticked, then below that you need to select a suitable player, such as Play16 (recommended) or SongPlayer. The command line should be something like "C:\Play16 %n" if you are using play16, and the "%n" is for the file name of the sound. And that's that set up! In order to play your sounds during your IRC session, type something like: "/sound soundname.wav", where you would put the name of the sound you wanted to play in place of "soundname.wav". Make sure you have the right file extension too (i.e. .wav, .iff, or .mp3).

### Using the F Key feature of AmIRC

Once you get to know IRC a little more, you will notice that there are a number of commands to remember, and you may well get to the point where there's just too many to remember. That's where the F key feature in AmIRC comes in handy. It can be found in the main AmIRC menu; Settings -> Setup, and in the F key section. There you will see various text boxes where you can enter your commands for each F Key. It is split into three sections, one where you can just press an F Key on it's own, another section for commands where you can press Shift and an F Key, and another for Control (Ctrl) and an F Key. But if you can't be bothered to keep pressing the return key after each time you press an F Key (as it goes straight into where you





type your messages), then you can just enter "n" after the command with no spaces. One thing to remember is that your command may contain a password, so do be slightly careful there. Now doesn't all that make things a bit easier? All your commands at the press of an F

Key! Don't forget to save them, by going to the main AmiIRC settings menu and clicking "save as defaults".

### Setting the system clock with Genesis

Are you one of those people (like me) who don't have a working battery in there Amiga? Don't you find it annoying when you keep having to set the time for the tasks you do on your Amiga? Then look no further than Genesis! But Genesis is a TCP/IP stack isn't it? So what's that got to

do with the Amiga's system clock? Well as a matter of fact, Genesis has the ability to query a time server, and set that time on your Amiga! How do I do it? In the Genesis settings, in the services section. You first need to tick the two check boxes, Sync clock (matches the time on your Amiga with the time server), and Save time (obviously keeps the time). Then you will need a time server to put in, I recommend: ntp2a.mcc.ac.uk. Save the settings, and the next time you go online Genesis should automatically set the time on your Amiga!



# PD Paradise

*Some utilities are glamorous and sexy, others sit quietly in the background and just do their job. Robert Williams has found two fine examples of the second type.*

## FAT95

**Author**  
Torsten Jager

**License**  
Freeware

**Available From**  
Aminet, disk/misc/fat95.lha

I've recently seen several people ask where they could buy CrossDOS 7, the last commercial version of the PC disk compatibility software provided with AmigaOS since version 2.1. The reason most want to upgrade is for long filename support so they can more easily use disks from Windows 95 and later machines. As far as I know Consultron, the publishers of CrossDOS are no longer around, so it is fortunate that there are several alternatives freely available on Aminet, FAT95 is one of them. The FAT part of the name comes from File Allocation Table this abbreviation identifies the disk format used by MSDOS and later Windows, there are several versions of FAT, 12, 16 and 32bit which support progressively larger disks. FAT95 supports all these versions so you should be able to use it to read most disks from PC's using a Microsoft OS. The only exceptions to this are WindowsNT and 2000

which use a different format for their hard disks, NTFS, I believe NTFS is also an option on Windows XP.

As I hinted above, FAT95 isn't just limited to mounting PC floppy disks, you can also use it to access FAT format removable disks (ZIPs etc.) and hard disks attached to your Amiga. If you're at all familiar with file systems on the Amiga the installation of FAT95 will come as no surprise, the file system itself is copied into the L: directory and then you can configure DOSDrivers to mount the drives you require. Several example DOSDrivers are supplied that can be used to mount floppy disks and ZIP disks, in the latter case you will just need to adjust the DEVICE and UNIT parameters to point to the drive.

Mounting a hard drive is also very simple although an example DOS Driver is not supplied, I just used one of the ZIP drive examples and changed the device and unit as required. FAT95 is clever enough to read the partition table in the master boot record (MBR) at the start of the drive and work out where the partitions are on the drive so you don't need to specify the low and high cylinders of the

partition. You specify which partition you want to mount by altering the last two characters of the DOSTYPE parameter in the DOSDriver, for example 0x46415401 would mount the first primary partition and 0x46415403 would mount the third. Extended partitions are also supported and they are mapped to "05" and above.

For disks over 4Gb Fat95 supports both TD64 (Track Disk 64) and NSD (New Style Device) standards and also has a direct SCSI option so almost whatever your controller you should be able to access large PC disks. As a test for this review I hooked up a 40Gb IDE hard drive from a PC with Windows 98SE to one of the IDE ports on my Catweasel Z2 and it worked flawlessly, I could see all the files and transfer back and forth, file names were retained both ways. There are a few limitations due to differences between FAT and the Amiga's native file systems, for example Amiga file comments are lost when copying to the PC. When viewing a PC disk FAT95 uses the unused comment field to display an extended date stamp (creation date and last accessed date) that the Amiga file system doesn't support. If you have an Amiga and a PC

and need to transfer large files occasionally this is an excellent way to do so and on most systems will be faster than any other method.

You can use Fat95 to format floppies on the Amiga but other types of disk need to be formatted on a PC first because the two systems use different methods of partitioning hard disks, MBR on the PC and Rigid Disk Block (RDB) on the Amiga. The author does point out that it would be possible to make a disk that was instantly readable on the Amiga by adding an RDB using HDToolBox (or a similar utility) to a disk that had already been partitioned on a PC.

FAT95 works well and handled all the PC disks I threw at it with ease. The documentation, which consists of two text files, is comprehensive, containing all the reference information you need and plenty of background too. Although to use it you need to setup your own DOSDrivers there are no arcane calculations or hexadecimal numbers to juggle. If you need to read PC disks this works well and it's freeware too!

# PrintManager

**Author**  
Stephan Rupprecht

**License**  
Shareware

**Price**  
8 Euros (about £5.00)

**Available From**  
www.stephan-rupprecht.de

PrintManager is a utility by the prolific Stephan Rupprecht that gives you increased control over the printing process. It does this by intercepting data intended for the parallel port (or any other port you configure) and storing it in a temporary file, with the data stored PrintManager can then offer additional control over when and how it is sent to the printer.

An installation script is provided in the archive, but all you really need to do is to drag the PrintManager program onto your hard disk, most people will probably put it in the WbStartup drawer so it is running at all times. Because PrintManager works at device level it will capture any data sent to the device you specify (parallel.device by default), this means it works with enhanced printing systems such as Studio and Turbo Print as they work at the driver or printer.device level respectively and still send their data through the parallel.device if printing to a parallel printer. If you use TurboPrint you will need to turn off the TurboPar option on the Printer page of the preferences program for PrintManager to capture your

prints. If you're worried about losing the additional speed to TurboPar don't fear registered users of PrintManager get access to its own fast parallel option which works even if you don't have TurboPrint. PrintManager also supports parallel ports on 3rd party expansion cards, you can even capture data from one device (say parallel.device) and print it to another (in my case the hyperPAR.device of my HyperCom 3Z). PrintManager captures the print data from the specified port using a patch, if you would prefer not to patch the system you can set your printer software to send print data to a special spool.device instead of one of the normal ports, spool.device supports up to 10 units so it can be used with the multiple printer feature of OS3.5 and above.

When you print from an application PrintManager starts capturing the data and shows the print job in its list, you can set in tool types whether it should wait until the job is completely spooled or start printing immediately. If there is more than one print job in the list you can use up and down buttons in the window to reorder the jobs so the most important one gets printed first (if the gtdrag.library is installed you can perform these operations with drag and drop). Once a job starts printing you can't change its order but you can pause printing, stop the job part way through and print it later or remove it from the print queue altogether. These options are much more elegant

than the usual method of cancelling printing, turning off the printer and waiting for the TurboPrint error to appear so I can cancel the print! In the print list there is a special job called «Next Job», you can move this in the list to indicate where a new job should appear and set it to paused or active to give any new jobs that status.

As the print data is stored in a spool file, PrintManager can offer some other handy options. You can schedule a print job for a later time, this might be useful to queue up jobs to print when you're out and the printer won't disturb anyone. Even if the application doesn't offer the option PrintManager can print multiple copies of a job, this is especially handy with programs that are slow to print or if you want to get on with one document while printing another. In this case you would print one copy from the application and then set the job in PrintManager to the number of copies required, once one lot of data had been sent from the application you could return to work and let PrintManager produce the copies. Jobs can be saved and then loaded and re-printed as often as you wish which is great for jobs like flyers where you often need many copies exactly the same.

Many options are available so you can customise PrintManager to work how you like and to make sure it is compatible with your hardware. The manual mentions several work-arounds that need to be used to overcome bugs in the driver software of 3rd party I/O cards. One of these options is to make PrintManager ignore certain tasks, the manual mentions that this could be used to make it ignore software for other devices such as scanners which use the parallel port. As PrintManager is a commodity it will normally run quietly in the background until you press its hotkey (Shift, Alt and P by default) however you

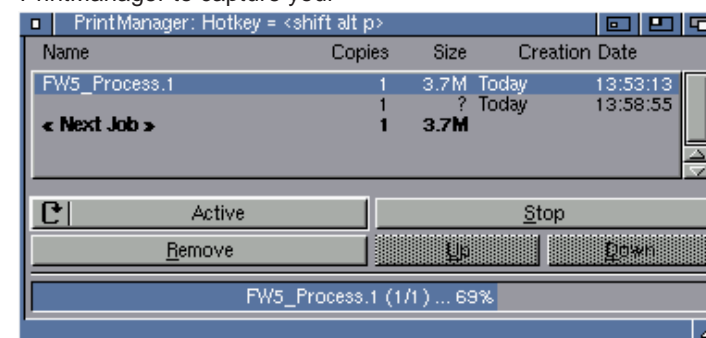


*Just a few tooltypes...  
PrintManager is  
very configurable.*

can set it so the window is opened, or appears iconified on Workbench whenever a print job arrives.

As it is shareware the demo version of PrintManager has a couple of features disabled, the fast parallel and save job options, there is also a nag requester that appears occasionally.

PrintManager is a mature utility with a good range of features and an effective interface. While it doesn't make the overall print time much faster (although I don't have the registered version to try out the fast parallel option) in most cases it does free up the application much faster so you can carry on working while the printer prints. I would recommend it to anyone who does a reasonable amount of printing, especially at it's low shareware fee.



*In the PrintManager window you have full control  
over all the jobs waiting to be printed.*



# Back to Basics

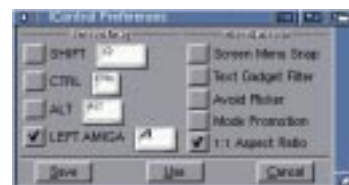
## Screenmodes and Mode Promotion

PC solutions mean many Amiga users are getting a graphics card for the first time. Robert Williams looks at how to solve some tricky screenmode problems using Mode Promotion utilities.

One of the unusual aspects of AmigaOS is the system of screens that allows you to run programs on separate virtual screens, which can be at a different resolution and colour depth to the main Workbench screen. There are many advantages to this system, such as being able to choose a suitable and efficient screenmode for the task at hand and also organising the working area so you don't have to juggle windows while working with several programs.

With the advent of ECS (Enhanced Chipset), AGA and graphics cards Amiga users gradually got more resolutions and colours to play with. In OS 2 Commodore introduced the display database which holds all the screenmodes available on an Amiga. A screenmode is the definition of display using a particular resolution, number of colours and video standard. The available screenmodes are limited by the monitor drivers installed in the Devs:Monitors drawer. With the greater number of modes a number of problems emerged, these included what to do about older programs which don't offer a choice of screenmode and how to view a program set to run in a screenmode which could not be displayed on a particular Amiga.

The answer to these problems is screenmode promotion, this



There are two simple promotion options in IControl Preferences.

is the process, of forcing a program to run in a different screenmode even if it doesn't offer a screenmode option or is set to run in a particular mode.

### When Promotion is Useful

#### Programs which don't have a screenmode requester.

Many older Amiga programs are programmed following Commodore's guidelines and therefore work perfectly well on a graphics card screen but don't have a screenmode requester. This means they are hard coded to work in a particular screenmode, often you can't even choose one of the ECS/AGA screenmodes such as Multiscan or Super72. In this case a mode promotion utility can be used to force a program to open in the screenmode of your choice. If you leave the utility running in the back ground every time you run the errant program it will be silently promoted into the correct screenmode just as if it had a setting.

#### Programs that automatically open in a particular screenmode

When many programs are first installed instead of asking nicely which screenmode they should open in or opening on the Workbench screen they just open in a default screenmode. Often this is a chipset screenmode, if you have a setup like mine where accessing the chipset is awkward this can be really annoying. However in these cases a mode promotion utility can be used to force the

program to open in a screenmode you can see. You can then use the program's preferences options to select the screenmode you really want. One problem that can occur with this approach is that the mode promoter keeps promoting the program even when you have set it to the right screenmode. To avoid this make sure you don't save the setting when you promote the program the first time. NewMode has a "This time" button in its promotion requester for just this reason.

#### When you change your screenmodes or install a new graphics card

Using the Amiga's standard chipset the selection of screenmodes you are usually limited to the selection of screenmodes provided by the monitor drivers supplied with the OS (although it is possible to tweak these with a utility like MonEd). With graphics cards the selection of screenmodes that can be produced is much greater, with both CyberGraphX and Picasso 96 a utility is supplied (CgXMode and P96Mode respectively) which allows you to create your own screenmodes. Any new screenmodes that you allocate will get a new modeid, the outcome of this is that any programs set to use the old screenmode won't find it and may not be able to open their screen. In these cases a mode promoter can be used to let you view the program and let you change its preferences.

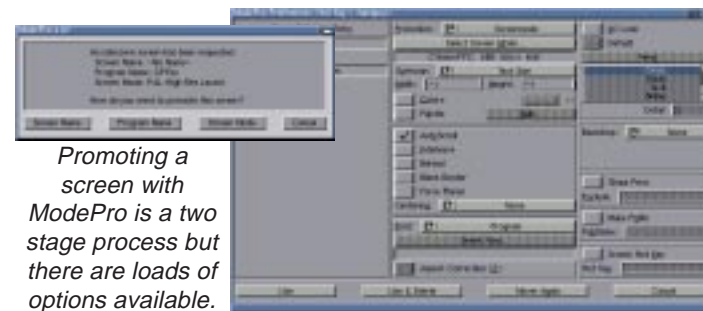
### Potential Problems

Forcing a program to run in a screenmode it isn't expecting can cause some problems. You

## ModeID

It is very rare that you need to know the modeid which identifies a particular screenmode however some programs do ask you to identify a screenmode in this way. To find out a modeid you need a utility such as getmodeinfo20u.lha which is in the util/misc directory of Aminet. This simple shell command pops up a screenmode requester and then reports the id of the screenmode selected. This is usually in the form of a hexadecimal number, for example the current screenmode I am using is 0x40C20045.

will find that many older programs and some newer ones particularly in the games and video areas just will not work when promoted, especially if the new screen is on a graphics card. This is usually because they use special features of the Amiga's chipset which are not emulated by the graphics card and its drivers. Another problem that can occur is that you don't have a suitably sized screen defined to promote a program to, this can lead to windows and buttons not fitting on the screen or excessive amounts of empty space. For example a program that expects a PAL Hires Laced screenmode may well need more space than a 640x480 VGA style screen on a graphics card will provide but 800x600 would be overkill. In these cases remember that you can always use your graphics card software to define a new screenmode that is just the right size.



### Mode Promotion Utilities Available

A simple mode promotion scheme is available in the IControl Preferences editor supplied with the OS, here you can check the Mode Promotion option which forces lores modes into their double scanned alternatives and Avoid Flicker which does the same for interlaced modes. However if you want more control, for example to promote to a graphics card screenmode then you will need a third party utility. Fortunately since the release of AmigaOS 2 a number have appeared. Two freely distributable utilities seem to have become the most popular and certainly have a wide range of features.

### ModePro

by Michael Rivers -  
util/cdity/ModePro.lha

ModePro consists of two programs, the utility that does the promoting which would normally be installed into the WbStartup to be run at all times and a preferences program which is used to setup new promotions.

There are three methods by which ModePro can identify a screen to promote, program name, screen name and screenmode. The name options both try to identify the program running in different ways, program is the name of the program trying to open a screen and screen name is the name of the screen that it is trying to open. Screenmode tries to promote a particular screenmode to another whatever program is trying to open it. The screenmode feature is useful because you can promote all the modes that

but perhaps less essential options can be used to give the screen a backdrop colour or image and to assign a hot key that will pop that screen to the front.

In addition to it's promotion options ModePro can also be used to open public screens for you. As you may know a public screen is one where several programs can open their windows, much like several programs can have their windows open on the Workbench screen. In ModePro you can define a public screen that does not currently exist, specifying its screenmode, colour depth, fonts and other options. Then set the programs you would like to open on that screen to use the correct public screen name, this is often configured using a tooltype. Now when you first run one of the programs you have configured ModePro will automatically open the new public screen. This could be used, for example, to have all your Internet programs open on the same screen no matter which one you start first.

### New Mode

by Andreas Linnemann -  
util/cdity/NewMode\_V39.lha

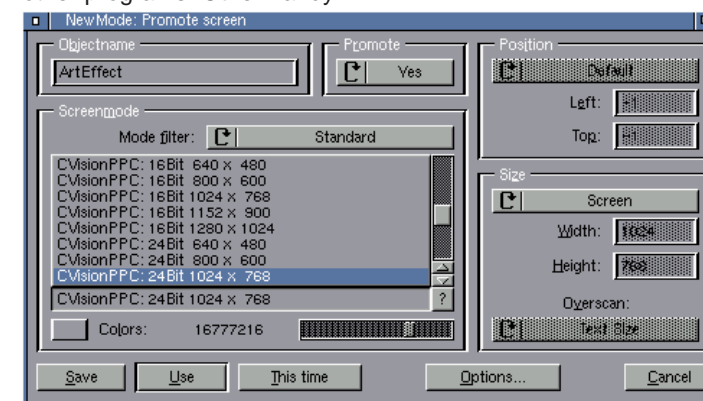
NewMode is an older and simpler program than ModePro, it was last updated in 1995 and consists of a single program file which serves as both the promoter and the preferences interface. Like ModePro it can recognise screens being opened by their program name, screen name or screenmode however it has

the advantage that you can use a combination of these, for example promote a program called this only when it opens in a particular screenmode.

When NewMode notices an unknown screen being opened it opens its Promote Screen window which contains a list of the available screenmodes that the program could be promoted to, the number of colours and the screen size to allow autoscroll and overscanned screens. You can also choose not to promote this program. With the choices made you simply click Save or Use to add this to NewMode's list of known programs permanently or for this session respectively. As I mentioned before the "This time" button lets you promote a program only once and is handy for sorting out newly installed programs which open on an invisible screen. Unlike ModePro NewMode cannot be used to promote a particular screen mode or to open public screens.

Running NewMode a second time or opening its interface from the Exchange utility produces a new window which lists all the programs you have defined for promotion, so you can edit and delete items. You can also control when NewMode will ask you about a screen, you can get it to ask for all screens, only new ones that don't appear in the program list or to automatically add screens without blocking the program requesting them (apparently this can be used to get around some badly coded programs which lockup when the Promote Screen window appears).

While NewMode clearly has many less options than ModePro it does everything most people will need for basic promotion and its interface is much neater. Because all the options are in the first Promote Screen window it is much quicker to setup a new program with NewMode than with ModePro.



NewMode has less options but fits them all in this neat Promote screen window making it quicker to use.



# Directory Opus 5

## Tutorial

*Directory Opus 5 can be intimidating for beginners but it's well worth the effort to master it. Robert Williams embarks on the first leg of a voyage of discovery!*

There's no denying that Directory Opus version 5 is a very complex program. The very reason that many people, myself included, like it so much is also a problem, Opus 5 is very flexible, most aspects can be configured to your liking. This flexibility can mean that the number of options available is overwhelming for beginners and they never get past the complex setup to enjoy the flexibility. When I first got Opus 5 it was a couple of months until I had it configured as I wanted and longer before I was able to have a bash at some of the more complex setup myself. In this issue's tutorial I aim to cover some of the basics of Opus 5 then in future issues I will go into more specifics. Please note that I'm using the latest version of Directory Opus 5, known as Magellan II, other versions of 5 are similar but you may need to allow for some differences especially in the menu and options requester layout. Opus 4 which is now open source is a totally different program so I wouldn't expect anything here to apply to that.

### The Manual

The Directory Opus 5 manual isn't the sort of book you would like to curl up in bed and read, it's very much a reference rather than a tutorial manual. However as Opus has many commands and functions it's well worth having the manual to hand as there's no way I will be able to mention all the possible options and commands in this feature. It's probably a good idea to have a browse through the manual in any case so at least you know roughly what it contains.

### Workbench Replacement

The major feature of Opus 5 was the Workbench Replacement mode, this meant that instead of running a file management utility separately Opus actually replaced the standard Amiga Workbench providing all of its features and adding many more including far more advanced file

manipulation options and much more flexible configuration. When you select Workbench replacement mode during the Opus 5 installation the

LoadWb command (which is called at the end of the s:startup-sequence to load Workbench) is renamed to loadwb\_old and replaced by a new version that loads Directory Opus instead. If you ever want to switch back to a normal Workbench temporarily you can hold down a Shift key while the Amiga boots, the Opus LoadWb command will notice this and run normal Workbench instead of Opus. If you wish to permanently switch back to Workbench just rename the LoadWb command and reinstate loadwb\_old by renaming that back to LoadWb.

### Screenmode

In Workbench replacement mode one slightly confusing aspect of Opus is setting the screenmode it runs in, you might think that you should set it on the Display page of the Settings/Environment requester however choosing a screenmode here leaves you with an extra blank grey Workbench screen. To solve this set the Display Mode in Environment to Workbench:Use, then Opus will use the Workbench screen and not open its own. If you want to change the screenmode with Opus using the Workbench screen just use the normal screenmode preferences program supplied with the OS.

**NOTE:** On my system, which has a graphics card and CyberGraphX 4, I have never been able to change the screenmode on the fly with Opus running. I always have to

select the new mode, save and reboot for it to work. I find the new OS 3.9 screenmode preferences program is particularly good because now I can at least use the test feature to make sure a mode will work before I save it.

### Launching Commands and Programs

In this tutorial I'm going to assume that you've got to grips with some of the basics of Opus, for example carrying out basic file operations such as copy and delete with the listers. If you aren't at this stage yet, take a look at Chapter 5 of the Opus manual which explains the major parts of Opus 5 including the Listers. I'm going to concentrate on customising the listers to suit your method of work and some of the additional ways you can activate Opus commands and launch programs.

### Editing the Lister Buttons

By default a toolbar of action buttons is displayed near the top of each lister when it is in name or icon action mode. You can easily edit the buttons that appear on this toolbar, removing ones you don't use and adding new ones. Just like the floating button bars and user menus that we'll see later you can use a lister button to perform many types of action, these can be an internal command, or running an external program or a combination of these.

Make sure the Workbench background or a lister is selected then choose "Edit Lister Toolbar" from the "Lister" menu, a small window with a copy of the current toolbar opens along with the "Button Bank Editor". Alternatively If you want to edit a specific Lister toolbar button open a Lister for any directory then just click on the button you want to edit while holding down key to jump straight to tion editor.

te a button just click on Toolbar window, a flashing highlight shows you the button is selected then click on Delete in the editor. To add a new button just click Add, you can re-arrange the buttons by dragging the button you want to move over to it's new position where it will be swapped with the existing button.

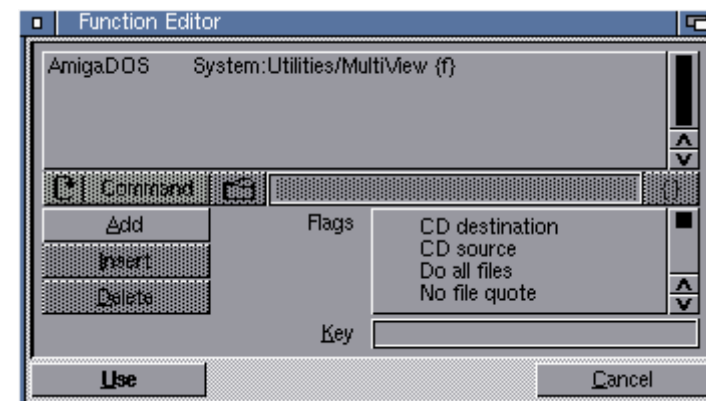
When you've added a new button or want to edit an existing one just click on the "Edit" button in the Button Bank Editor, this will open the Button Editor window. You can define up to three functions for a lister toolbar button, these are accessed by a right, left or middle mouse button click. In the Button Editor the buttons are shown in a list at the top left, a tick shows you which mouse clicks have a function assigned. To add or edit a function click on the mouse button you want to define then enter a name for the function in the "Name" text gadget and select an image to use for the button. Opus supports Amiga icons (.info) and any picture supported by datatypes for these images, a number of suitable ones are supplied with

Opus and many more can be found on Aminet. Now let's set up what this button should do by clicking on "Edit Function".

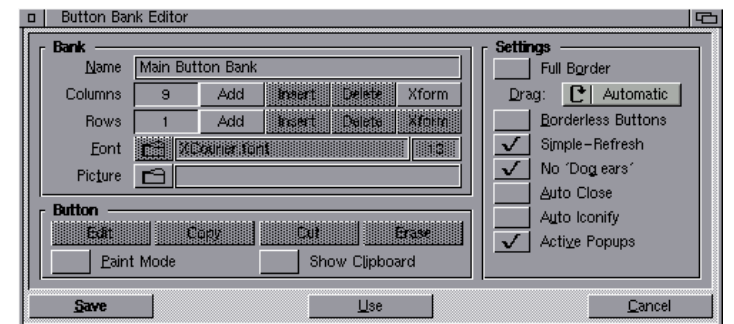
### The Function Editor

This opens the Function Editor Window, I'm devoting a separate section to this window as you will find exactly the same window is used to define functions in Opus however you activate them. At the top of the function editor window is a list of all the commands that will be carried out by this function, this allows a function to be anything from one command to a complex script of many different commands. The line below the command list lets you edit the command selected in the list. On the left is a cycle gadget where you specify the type of command it can be a built-in Opus command, an AmigaDOS (shell) command, a Workbench program, a shell script or an AREXX script. The folder button brings up a list of available commands or a file requester so you can select a program or script depending on the command type selected. Next is a text box where the command itself goes, here you can add any arguments required. Finally we have a button ({} ) which lists a selection of possible variables which you can insert into the command line.

As an example we'll add a toolbar button which runs the GetSizes command, this is an internal Opus command that calculates the file size for all the selected directories in a lister. If you're in the Edit Function window cancel out until you get back to the Button Bank editor. Now click Add



The Function Editor, used throughout Opus.



The Button Bank Editor for my button bar shown on the previous page, notice I use the Active popups feature.

next to Columns to add a new button to the toolbar. Click on the new blank button in the Toolbar window to select it and then on Edit in the editor. We'll assign our command to the left mouse button so in the "Button Editor" window just enter a Name and select an image (a suitable one is supplied with Opus in the Images drawer which is the default for this file requester). Click the "Edit Function" button and choose "Add", now we can define our command. GetSizes is an internal Opus command so leave the cycle gadget set to command, click the folder button and select "GetSizes" from the list. With the command selected we can click on the variables button ({} ) to see if there are any options available, for this command "FORCE/S" is the only one listed. Referring to the manual we can see that adding FORCE to the command line will tell the GetSizes command to recalculate a folder's size even if it has been calculated before this session. As this is quite a useful option select it from the list and click "OK" to insert it in the command line. For this simple command that's all we need to do, click "Use" to exit the function editor and button editor and "Save" in the Button Bank editor to make your changes permanent.

Now open a lister showing a directory which contains sub-directories, for example your Workbench partition. Switch the lister to name mode and select some or all of the sub-directories now click your new button and Opus should calculate the total size and display it in the size column.

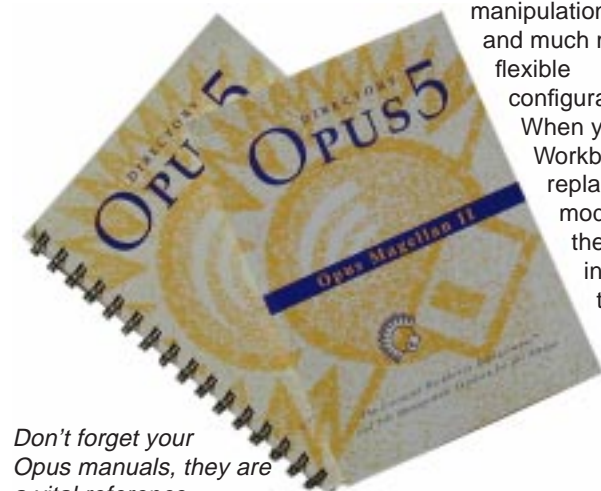
### Button Bars

Floating button bars are very similar to the lister toolbar but because they are not part of a lister they can offer many more options. If you like you can make button bar buttons (or indeed menu items which we will talk about later) act on the files or directories you have selected in a lister.

To create new button bar go to the "Buttons" menu and select the "New" submenu, here you can choose to create a graphic or text button bar, the only difference is whether the button will have a text label or an icon identifying it. Select the type of buttons you would like, I'm going to choose text, and a new window appears with one button in it. Before we give this button an action let's take a look at some of the options that are grouped on the right side of the "Button Bank" Editor window. If "Full Border" is checked your buttons will be inside a normal Amiga window, you may prefer to uncheck this which removes all the window furniture and replaces it with a slim drag bar so you can still move the window. Using the "Drag" cycle gadget you can select where the drag bar will appear or even remove it all together.

Tip: Setting "Drag" to "None" means you can't easily move the button bar or access its right click menu, to do so hold down "Ctrl" and click on the button bar to temporarily show the drag bar so you can move the window. Holding "Ctrl" while you right click on the bar will show the menu.

Selecting Borderless Buttons removes the 3D effect border



Don't forget your Opus manuals, they are a vital reference.







# Quake II

Here's a taste of what you've got to look forward to in the forthcoming port of the second in the Quake series. See the news pages for more details.

The first three shots below are from the standard game:



These two are from some of the mods which have already been ported:



Yee Ha Pardner!

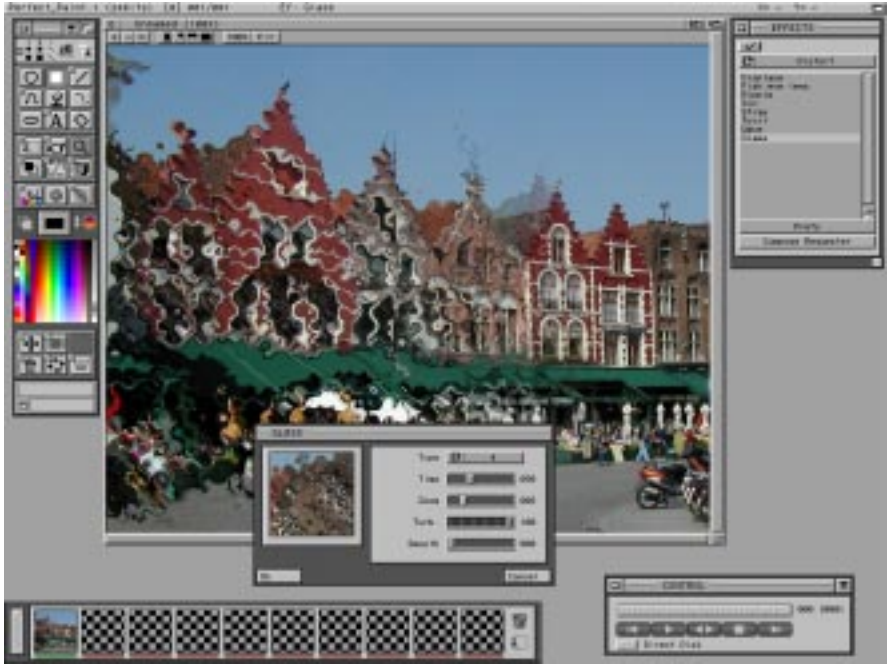


Is he choking his chicken?

## Descent: Freespace



## Perfect Paint



Perfect Paint in action with the funky Glass effect.

<http://www.totalamiga.org>